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AIR CORPS NEWS LETTER

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AIR CORPS NEWS LETTER

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The chief purpose of this publication is to distribute information on aeronautics to the flying personnel in the Regular Army, Reserve Corps, National Guard, and others connected with aviation.

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UP-TO-DATE HINTS IN INSTRUMENT FLYING

By Captain Charles A. Ross, Air Corps
(Prepared while member of Staff of Instrument and Navigation Unit, Materiel Division)

Instrument flying in the recent fast, high performance airplanes presents a problem quite different from that to which the Air Corps pilot is accustomed in his normal routine. This fact has been brought home of late with the delivery of airplanes of this type to the Air Corps.

Certain problems are encountered in the flying of these airplanes under instrument conditions in turbulent air which do not exist in the slower, older types. As a result of air bumps which tend to cause rapid accelerations, certain of the instruments show exaggerated readings with very little change in the attitude and direction of the airplane. In addition, under rough air conditions, it is often extremely difficult for the pilot to see and read the instruments distinctly. His head bobs about considerably and this, coupled with the fact that the shock-mounted instrument board itself moves somewhat, causes his vision of the instruments to become exceedingly blurred. Moreover, two of the Rate instruments, the Bank and Turn Indicator and Rate of Climb Indicator, are so responsive to high accelerations while the airplane is flying in turbulent air that a highly different method of instrument use from the usual 1-2-3 system becomes necessary.

A few years ago the installation in Pursuit airplanes of gyroscopic instruments, other than the Bank and Turn Indicator was not advocated, due to the fact that acrobatics and other extreme maneuvers would cause the gyros to upset and render the instruments useless. It has now been determined that the gyroscopic instruments, the Flight Indicator (gyro horizon) and the Turn Indicator (directional gyro) are the only ones which will permit satisfactory flying of high-performance airplanes under every instrument condition. Let it not be construed, however, that the other flight instruments should be removed from the instrument panel, for their use is essential to supplement and check the gyroscopic instruments.

Certain misconceptions appear to exist in the minds of some pilots concerning the proper use of some of the instruments on the instrument panel. Each has been installed for a definite purpose, and knowledge as to its use and function will aid in obtaining the proper combination of readings which alone will accomplish the desired end, namely, a clear, concise picture of the attitude and direction in which the airplane is flying.

In this discussion the term "attitude" will be used considerably. Webster defines attitude as "the orientation of an aircraft in the air as viewed from a stationary spot beneath." Instrument flying is largely a problem of instrument utilization to enable the pilot to visualize the airplane's attitude at all times as clearly as though actual reference to the earth's natural horizon were possible.

Flight instruments on modern airplane instrument panels may be roughly grouped into two main classifications - the Amount Instruments, those which indicate the attitude and heading, and the Rate Instruments, those which indicate how rapidly the attitude and heading are changing when the airplane is not flying a straight and level path. Among the Amount Instruments, the Flight Indicator (gyro horizon) and Turn Indicator (directional gyro) are extremely important. Also included under this classification are the magnetic compass, which shows the bearing or heading of the airplane with relation to magnetic north, and the sensitive altimeter which informs the pilot the height of the airplane above some definite reference level. The Rate Instruments include the Air-Speed Indicator, the Bank and Turn Indicator, and Rate of Climb Indicator.

It has been pointed out heretofore

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that certain principles formerly taught concerning instrument flying require modification to permit the flying of high performance airplanes under instrument conditions. These same modifications apply to the flying of any airplane under instrument conditions, and if borne in mind should make flying under the hood easier and much less fatiguing. A brief discussion as to the function, use, and limitations of each of these instruments may be of some value to pilots who are having difficulty in this work.

FLIGHT INDICATOR (Gyro Horizon).- Certain pilots have remarked that the Flight Indicator is unreliable because it depends for its functioning on a gyroscope which upsets if the airplane is maneuvered violently. True, this gyro will upset if the airplane is made to loop, roll or is banked very much beyond the vertical. Actually, there should be no occasion to fly any airplane acrobatically while under the hood or flying in an overcast. The Flight Indicator will not upset unless the airplane is banked twenty degrees beyond the vertical or is put into a climb or dive at an angle greater than fifty-five degrees from the horizontal. The Flight Indicator will indicate accurately the attitude of the airplane without any lag whatsoever and under certain flight conditions is the only instrument available which will satisfactorily indicate attitude.

It may be necessary to observe closely at times to determine if the airplane is nosed up or down a slight amount, for in the standard Flight Indicator one degree of displacement of the airplane produces only one thirty-second of an inch movement of the "little airplane" with reference to the horizontal bar. It is strongly recommended that the pilot use only one of the two lines on the horizon bar.

With the airplane in level flight, the "little airplane" may be adjusted by the use of the available knob to match it against the upper line. In this manner small changes of attitude with resulting small movements of the "little airplane" with respect to the bar may be readily observed. The horizon bar on future flight indicators will consist of a single line, and it is contemplated that the sensitivity will be increased so that small changes of attitude will be more readily distinguishable. There is very little possibility of the Flight Indicator failing entirely, for in the use of many of them during and since the days of the "air mail," the writer has experienced only one failure, which occurred after definite indications of malfunctioning were evident for a half hour or so before the actual failure.

TURN INDICATOR (Directional Gyro).- This instrument is also equipped with a gyroscope which will upset if extreme maneuvers are attempted. Gentle, medium and fairly steep turns, however, are possible without danger of upsetting it.

If the gyro should upset with resulting spinning of the card, this can be quickly stopped by caging or using the Flight Indicator to return the airplane to level attitude. It is a characteristic of any gyroscope to precess somewhat, necessitating an occasional caging of the instrument and readjustment for the desired compass course.

Excessive precession when observed should be noted on the Form 1 in the airplane and necessary replacement accomplished.

The magnetic compass is very necessary on the instrument panel to determine the course heading which it is desired to fly. However, the standard compass is unsteady in rough air and extreme care must be exercised to maintain level flight if the compass is to be used to hold desired heading. The Turn Indicator is unaffected by roughness of the air or changes in the attitude of the airplane and will indicate accurately the heading if, of course, occasional corrections are made for gyro precession when necessary.

For normal cross-country flying, it is suggested that the pilot use a zero setting of the Turn Indicator to maintain his desired heading, as he will find it is much easier, particularly in rough air, to see and hold the zero matching the lubber line than to attempt to maintain some odd bearing agreeing with the compass card. However, if the problem is one of range orientation, to avoid confusion it is desirable that the Turn Indicator card agree with the compass card. If the pilot is flying a radio compass course, it is much easier to use a zero setting of the Turn Indicator made with a centered radio compass indicator needle than to try to keep the sensitive needle continually centered. If data on the winds aloft is available, so that drift angle may be determined, the amount of this drift angle may be set to the right or left of zero on the Turn Indicator after the radio compass needle has been centered. The airplane may then be turned until a zero turn indicator reading is obtained, thereby applying a drift correction and enabling the airplane to fly a straight course to the transmitting station, instead of a curved path which would result without drift correction.

SENSITIVE ALTIMETER.- Very little difficulty should be experienced in the use of the sensitive altimeter. Althoug

its primary purpose is to inform the pilot of the altitude of the airplane above some definite reference, such as sea level, it may be used as an aid in maintaining attitude. For example, stationary altimeter pointers provide an excellent indication that the airplane is maintaining level flight; movement of the pointers either up or down usually is a definite indication that the airplane is either climbing or diving.

The latest type of altimeter is provided with both setting indices and a barometric window which give the pilot two methods of accomplishing the correct setting of the instrument while flying the airways. He has merely to adjust the "altimeter setting," furnished by the weather stations along the route, in the barometric window provided to maintain the correct elevation as called for in his flight plan. Pilots must keep in mind that temperature corrections are not taken care of, so that when actually "on instruments," it is advisable to allow a couple of thousand feet additional altitude in order to be sure of clearing the highest point along the course.

If the altimeter is not provided with a barometric window, the pilot, in order to obtain the proper setting of the indices, may refer to the table provided in the Radio Facility Chart, and convert the altimeter setting as broadcast in inches of mercury to feet. Care must be taken to apply the proper setting of the indices above or below the zero. If the pilot upon arrival at his home or other Air Corps station desires to make an instrument landing and prefers to have the altimeter reading zero upon contact with the ground, he may, on special request from the ground station radio operator, obtain a pressure altitude setting.

AIR-SPEED INDICATOR.- The air-speed indicator can usually be depended upon as a good check on the attitude of an airplane. A steady air speed is a very good indication that level attitude is being maintained, and, similarly, an increasing or decreasing air speed denotes a nosed-down or nosed-up attitide. However, care must be exercised for, due to the inertia of high-speed airplanes, changes in air speed occur slowly as attitude changes, introducing a lag which may be somewhat confusing to the pilot. If the attitude is carefully controlled by use of the flight indicator, very little attention need be given the air-speed indicator.

BANK AND TURN INDICATOR.- Early instrument flying training according to the Stark 1-2-3 system taught that the pilot should center the bank and turn indicator needle, then center the ball and obtain level attitude in pitch by means of the Rate of Climb Indicator, the Altimeter and the Air-Speed Indicator. Instrument flying in fast, high-performance airplanes has demonstrated that pilots are having considerable difficulty trying to keep the needle of the Bank and Turn Indicator centered. Small changes in direction which occur very rapidly at high speed have the effect of producing extreme swinging of the bank and turn needle, although the actual change in heading may be very small. Even in smooth air conditions, the maintenance of a zero setting of the needle is extremely tedious, and after several hours pilots find themselves exceedingly tired. The use of the gyroscopic instruments for maintaining attitude and heading is much less fatiguing.

It is not advocated, however, that the Bank and Turn Indicator be removed from the board. Pilots should be perfectly familiar with its use, for it is the only instrument which will make recovery possible, if inadvertent neglect of the other instruments has resulted in a spin. Moreover, for occasional reference, a well adjusted Bank and Turn Indicator can be of considerable assistance in the making of turns, although this use is not entirely essential as uniform turns can be accomplished solely with the flight indicator.

In flying instrument checks, pilots are often required to fly without the aid of the Sperry gyroscopic instruments. For this reason it is important to be thoroughly familiar with the use of the Bank and Turn Indicator. The Bank and Turn Indicator should be considered in somewhat the same category as the parachute - desirable to have, knowledge of its use essential, but necessary only for practice or in cases of extreme emergency.

THE RATE OF CLIMB INDICATOR.- The name given this instrument by the Air Corps is perhaps a misnomer. Preferably it should be called, as it is called in most commercial circles, a vertical speed indicator, for it is just that and nothing else. Improper use of the Rate of Climb Indicator can result in considerable confusion. This is particularly true in high-speed, high-performance airplanes where small changes of attitude result in large rates of climb or descent. A recent complaint has been that in flying fast airplanes the pointer of a Rate of Climb Indicator may make unnoticed several revolutions around the dial, after which the pilot has no means of determining if the indication is up or down. Use of the instrument at that point as an attitude indicator may result in a

wrong guess, and the pilot will find his troubles getting serious.

The Rate of Climb Indicator is not intended for use as an attitude indicator. If the pointer position is such that the pilot does not know whether the airplane is ascending or descending, he should immediately match the "little airplane" with the horizon bar on the flight indicator and forget the Rate of Climb Indicator entirely. It will be found that in a few seconds the rate of climb indicator pointer will be stationary on zero or very near zero, providing the airplane is flying in smooth air.

It is suggested that pilots, while under the hood, practice placing the airplane in any unusual attitude, either a climbing or diving turn will do, so that the amount of rate of climb or descent is uncertain; then the airplane should be quickly restored to level attitude by means of the flight indicator and observation be taken of how nicely the rate of climb indicator pointer returns to zero. This test will be more convincing if the safety pilot places the airplane in the awkward attitude.

Because of the fact that the Rate of Climb Indicator will, in smooth air, give a fairly good idea as to whether or not the airplane is maintaining level flight, pilots have gained the misconception that it can be used under all conditions as an attitude indicator. Under certain conditions of flight, the Rate of Climb Indicator will appear to be the biggest liar imaginable. Actually it is not.

For example, while flying over mountainous regions, ascending and descending currents are encountered which cause the rate of climb indicator to show extreme rates of climb or descent, when it is definitely known that the airplane is maintaining level attitude. Due to these ascending and descending currents, the airplane is actually ... either going up or down exactly as the instrument indicates. Under these conditions, particularly while "on instruments," it is most inadvisable for the pilot to use it as an attitude indicator, for the airplane is apt to be placed in a severe dive or climb. Since descending air currents are often encountered on the leeward side of mountains, plenty of clearance should be allowed while flying under instrument conditions to take care of any loss of altitude which may occur. By the behavior of the Rate of Climb Indicator, experienced instrument pilots are aware of the exact time they are crossing mountain ridges.

Since it has been shown that the Rate of Climb Indicator can at times cause considerable confusion, it might seem desirable to remove it from the instrument panel. Its removal has been considered, but for instrument landings it is essential to determine when the correct rate of descent has been obtained. Future Rate of Climb Indicators with the pointer travel limited to 170 degrees in either direction from zero so that no confusion can occur as to whether the indication is of rate of ascent or rate of descent.

Sometimes, as during instrument check flights when the use of the Flight Indicator is not permitted, the pilot must use either the Altimeter or Rate of Climb Indicator to maintain level flight. The Altimeter can be advantageously used by noting the pointer movement. If the Rate of Climb Indicator is used, care should be taken to avoid over-controlling. Let us assume, for example, that a medium turn is being made. The pilot allows the nose of the airplane to drop slightly and discovers that the pointer of the Rate of Climb Indicator is moving downward. Of course the bank is tightened by pulling back on the stick or control column. The pilot must not continue to pull back until the indicator reads zero, for the pointer will not reach zero until the airplane is in a decidedly nosed-up attitude. Instead, the pilot should endeavor to maintain the attitude assumed by the airplane as soon as the direction of the pointer changes, for it will then be in level flight.

RADIO COMPASS INDICATOR.- The Radio Compass is one of the outstanding aids developed to facilitate flying on instruments, but there are a few important things which must be remembered concerning its use. The indicator is extremely sensitive and will respond to the minutest changes in bearing. For this reason expeditious use of the sensitivity knob is recommended to maintain a sensitivity such that about 15 degrees change of bearing of the airplane produces full deflection of the right-left indicator. Visualize the needle as pointing in the general direction of the transmitting station and no difficulty will be had in the "follow-the-needle" sensing of the instrument.

Radio range transmitting stations may be used with complete assurance that the airplane will always be heading toward the transmitting station, but extreme care must be exercised in the use of broadcasting stations, particularly those of the higher frequencies. It is definitely known that the higher frequency waves do not travel in straight lines. Furthermore, the broadcast band is badly crowded with a number of stations on the same frequency, and there

is a chance that the Radio Compass receiver will receive a signal from more than one transmitter at the same time, in which case the bearing indicated will not be a true one. Radio compass bearings on broadcast stations should be carefully checked with the magnetic compass bearing and the estimated position. If any doubt exists, it is recommended that range station bearings only be used. The audio A or N signal often helps in cases of uncertainty.

It would be very desirable if the indications of all of the instruments we have been discussing could be grouped into one ideal flight instrument which would tell the pilot everything he needs to know, so that instrument flying would be as simple as looking out through a large hold in the windshield. Considerable thought is being given to the development of just this sort of instrument.

Until we have it, however, we must use to the best advantage the instruments we have. If the instruments we now have are properly utilized, instrument flying can be just as simple and certainly more accurate than contact flying.

Excellent practice can be obtained in a Link Trainer, but it is true that all flying conditions, particularly those encountered in turbulent air while flying high speed airplanes, cannot be exactly simulated. Instrument flying requires a great deal of practice, and the required minimum of hours "Under the Hood" and "Instrument Other" is not enough.

There is not much chance for instrument flying in formation, but when a pilot is unaccompanied by other airplanes, he may take the golden opportunity of dropping his seat as low as possible and making use of the instruments. An occasional glance outside will assure him that all is clear. In this manner many pilots fly "on instruments" a great deal of the time while on cross-country. They find it not only easier to fly more accurate courses than if "flying contact," but acquire a great deal of confidence in the instruments and their own ability to use them. As a result, when the clouds get down on the tree tops, they do not hesitate to climb up into the overcast and go right on through.

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Major John S. Gullet, Air Corps, has been relieved from duty in the Office of the Assistant Secretary of War and assigned to duty as military attache and military attache for air to Canada, with station at Ottawa, Canada.

THE PIRATE REMOVES HIS PATCH

By the France Field Correspondent

Ol' Pirate Morgan, with the patch over his eye, has been slumbering in the environs of France Field these past, long years, oblivious to the many new and revolutionary changes in the Air Corps and the 6th Bombardment Group. His figure is the insignia of the erstwhile 6th Composite Group, now designated as the 6th Bombardment Group.

Perhaps the fuss across the sea, or the fact that there may still be strange places to visit, capture and loot, or perhaps even the miniature tornado which swept his abode a few months ago, roused the ol' boy. At any rate, he now appears with not one, but two good eyes, and wicked ones they are. He feels very strong and competent to rule not the seas, as he did of old when his name was the terror of the Spanish main, but the lanes of the sky which lead to the Panama Canal. When the ol' pirate stirs like this, it means that there is work for everyone, which is exactly the condition at France Field today.

The Pirate's stronghold has trebled in strength in the last few months. New squadrons were due to be activated on the first of February. New, temporary barracks were scheduled to be completed then, too. The Inspector General's representation will arrive in the next two weeks, and the Air Corps Technical Inspector is here at present. So with the moving to new barracks, the check and double check on unit funds, records and so forth, the revaluation of the Post Exchange to admit new organizations, the endless intrigue to obtain "key" men for each organization, as well as the routine work, France Field is a beehive rather than a pirate's nest.

The 25th Bombardment Squadron splits personnel to form the 3rd Bombardment Squadron. The 7th Reconnaissance Squadron furnishes the personnel for the 39th Observation Squadron. The 1st Depot Squadron is disbanded and absorbed by the 16th Air Base Squadron. Headquarters and Headquarters Squadron of the 6th Bombardment Group will be augmented from a skeleton outfit to normal complement by personnel from the 16th Air Base Squadron and the tactical organizations. The 74th Bombardment Squadron, a part of the 6th Bombardment Group, is being organized at Albrook Field, as there is no room here at France Field for it.

Pirate Morgan attained full glory and power when his group was first stationed here at France Field. Now that he has stopped eating Lotus leaves, he will re-

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A FAREWELL TO 2ND BOMB. GROUP PERSONNEL

"It is with great pride, mingled with sorrow," declares the News Letter Correspondent of the 2nd Bombardment Group, Langley Field, Va., "that I write this column.

"Through many years, this, the Second Bombardment Group, has gathered a vast field of data and experience. Many times honors have been bestowed upon the officers and enlisted personnel of this Group. A time has come when the rest of the Air Corps will enjoy and share with us the vast field of experience gained by hard work and long hours. Never a grumble, never a growl. That, my comrades, is something to be proud of. A finer group of officers and enlisted men has never been assembled in any Group in the Air Corps. A great majority of the officers and enlisted personnel has been transferred to the 25th Bombardment Group, which is scheduled for duty in Puerto Rico; the 29th Bombardment Group and the 41st Reconnaissance Squadron whose home station will be Tampa, Florida. The 1st Air Base has also staked a claim, and to them goes our present Group Commander, Lieut. Colonel Clyde V. Finter. To the Air Base, a great gain; to the 2nd Bombardment Group, a great loss. Col. Finter, we wish you the best of luck. Major Theodore J. Koenig will take command of the 25th Bombardment Group.

"Puerto Rico has a wonderful climate. Borinquen Field is the beauty spot of the Island. Cooperation between the civilians and Army personnel is the utmost. Everything is in your favor, Major Koenig, and with your vast experience success must come in your direction. Best wishes, Major Koenig.

"The 29th Bombardment Group also gets a Group Commander with a world of experience in Bombardment Aviation, Major Vincent J. Meloy. Success has always been yours, Major Meloy. May it always continue.

"The 41st Reconnaissance Squadron receives an officer whose name has often blazed across the headlines and ether, Major Caleb V. Haynes, of B-15 fame, who becomes its commanding officer. Luck to you, Major Haynes. The 2nd Bombardment Group will miss you.

"Last, but not least, we have kept Major Harold L. George, who assumes command of the 2nd Bombardment Group, as of February 1. Major George was born in West Sommerville, Mass., and attended George Washington University and the National University Law School. He entered the Army in 1917 and served in Bombardment Aviation in France during the World War. Major George won the Bombardment Airplane Race at the National Air Races in 1923, and the National Bombing Matches in 1925. Major George also graduated from the Air Corps Tactical School in 1932, and the Command and General Staff School in 1937. He was then sent to Langley Field, Va., and assigned to command the 96th Bombardment Squadron, which he commanded until his present assignment as Group Commander of the 2nd Bombardment Group. Your fine record speaks for itself, Major George. This Group is proud to have you as Group Commander.

"Much credit is due the 1st Sergeant of Headquarters and Headquarters Squadron, 2nd Bombardment Group, William E. Nance, who entered the Army as a recruit October 16, 1934, and was promoted from Corporal to the grade of 1st Sergeant on December 27, 1939. That proves what a man can do in the Air Corps with a little effort. Sgt. Nance has guided his organization through a very trying period, with hundreds of men having to be housed, fed and trained. Little thought being given to himself, he has often worked until after midnight in order that his men would be well taken care of. We are very fortunate in having a man of his calibre for our First Sergeant. May his career always be a successful one. A tough job well done - Salutations, Sgt. Nance!

"The following-named officers have been transferred to the 25th Bombardment Group: Majors Theodore J. Koenig, William B. Souza, Edward A. Hillery, Captains Alva L. Harvey, Neil B. Harding, Ford J. Lauer, Ralph E. Koon, Irving L. Selby, John W. Egan, 1st Lts. Carl W. Carlmark, Torgils G. Wold, Jasper N. Bell, George P. Champion, Thomas B. Nixon, 2nd Lieuts. Joseph A. Thomas, Arthur H. Rogers, Clarence K. Longacre, Alan D. Clark, Harvey C. Dorney, David A. Tate, James Giannetti, Theodore R. Aylesworth, Dalene E. Bailey, Raymond F. Bloszies, Curtis E. Caton, Winton R. Close, William H. Lang, Charles A. Leidy, Alvin N. Moore, Frederick H. Postal.

"The following-named officers have been transferred to the 29th Bombardment Group: Majors Vincent J. Meloy, Melvin B. Asp, Cornelius E. O'Connor, Hugo P. Rush, Captains William D. Old, Walter G. Bryte, Frank H. Robinson, John A. Samford, Edwin L. Tucker, 1st Lieuts. Carlos J. Cochrane, Charles E. Bochman, 2nd Lieuts. Bela A. Harcos, Chris H. Reuter, Henry C. Godman, William S. Barksdale, John E. Carmack, Phillip L. Mathewson, Charlie R. Bond, Jr., Raymond J. Busse, Earl B. Cook, Robert W. Evans, James L. Lee, Edward P. Myers, John T. Passage, William S. Pocock, Jr., Stuart M. Porter, Clyde A. Ray.

"The following-named officers have been transferred to the 41st Reconnaissance Squadron: Major Caleb V. Haynes,

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ALAE SUPRA CANALEM

Part IV

By Brigadier General Herbert A. Dargue

This article deals with flying in Panama and, in order that we have a mutual understanding to begin with, let us first dispel the idea that this Isthmian country is a land of constant treacherous weather, with no emergency landing fields and few aids to navigation, and that an airplane pilot faces the perils of tropical storms and jungles every time he flies.

Such is not the case. On the Pacific side of the Isthmus it is possible to travel the distance from Albrook Field to the Costa Rican border without, at any time, being more than 30 or 40 miles from a possible landing field. This situation does not hold on the Atlantic side, or on the Pacific side to the east of Albrook Field. But with a $400,000 set-up for building landing fields, there will be some emergency airdromes soon partially to fill these gaps.

It is the policy on the Isthmus to fly the commercial routes, to leave the jungle to the wild animals that like it, to let the weather have its sway. Line squalls and thunder storms are treacherous in the States, and we have them here, too. Leaving Albrook Field and flying westward (the States route), we pass over good fields at La Chorrera, Chame, Rio Hato, Aguadulce, La Mesa, Las Lajas and David. Other fields are available off this route on the Mala Peninsula, or, if we fly down the Pacific toward South America, there is a field at Jaque, about 125 miles from Albrook. Other fields are planned between these two airdromes at San Miguel Bay and La Jolla or Pacora. Fields on the Atlantic side are few in number, but available sites are being surveyed for future development.

All of these fields are being fitted into the plans for air defense of the Canal - auxiliary airdromes, dispersion fields, emergency fields, and each will have some essential facilities, the extent of the installation depending on the size and the location of the individual field.

Shall we examine the radio aids to navigation? And what of the projected aids we have heard mentioned?

There is one radio range beacon on the Isthmus - at Fort Davis, on the Atlantic side of the Canal Zone near France Field. It is for the use of the Army and civilian pilots as well. The easterly leg of this beacon, with a course of 72 degrees, passes over France Field and is laid then on Barranquilla and Santa Marta. Its reciprocal of 252 degrees is laid on David, Republic of Panama. The northerly leg, with a course of 22 degrees, is laid on King-Kingston, Jamaica. The southerly leg, course 207 degrees, passes off the Mala Peninsula after showing the way to Rio Hato. This beacon has been picked up at distances well over 300 miles.

A runway localizer beacon probably will be installed at Rio Hato for bad weather landings. A KW receiver, now being developed, also may be used as a field localizer, mainly for tactical work.

At Cape Mala, southwest of Albrook Field, and at Cristobal Mole, there are identifying stations for radio compass work. The Cape Mala station, broadcasting on 305 KCS, is available for ten minutes at 15 and 45 minutes after the hour. It has an "M" signal. The Cristobal Mole station's signal is "T," with broadcasts of ten minutes starting on the hour and half hour. The Navy has a station at Summit, in the Canal Zone, which is available on call. There is also a Naval station at David, in the western part of the Republic.

In addition to their regular broadcasting stations, Albrook and France Fields have airdrome control sets of 25 watts, broadcasting on 219 and 201 KCS, respectively, which are available on request for radio compass work. In Colon, on the Atlantic side, and Panama City, on the Pacific side, are commercial stations of 250 and 100 watts, respectively, and are available for radio work during the hours of operation. There are similar stations in other Latin and South American countries.

When traveling through Central and South America, the Air Corps has become largely dependent on Pan American Airways for radio facilities. The Pan-American stations have been very cooperative in every way possible and have never failed to do their bit to help the Army pilot with radio bearings, weather reports, or any other information which they could provide. When the trained airman in Panama mentions tropical weather he does not shudder with fear, for he knows that most any rainstorm he sees is generally of a local nature and, if he cannot fly around it, he can wait until the storm passes on and continue on his way. Seldom are fields in Panama closed in for more than an hour at a time.

The dry season in Panama is ideal for flying. And when those big tropical moons lay bare the landscape of its

blanket of darkness, the co-pilot has an additional job to awaken the pilot from his dreams of perfumed gardens and languid lassies.

In the wet season we do our flying in the morning - a good rule. But the afternoon storms often pass and disclose a beautiful sky with its Southern Cross so that we may play hide and seek with the artillery searchlights among the remaining clouds.

This country is "on the up" for the airman - increasing aids to navigation, better information on the weather, more airports, a larger number of our pilots gaining experience and finding good flying ahead.

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MOFFETT FIELD'S POPULATION INCREASES

For the past few years, Moffett Field has been a small and virtually unknown post in the Air Corps. Numerous officers and men of the Air Corps knew little of its existence or location. However, with the large expansion throughout the Army, Moffett Field takes its place as a leading post. From a strength of 350 officers and men, it has jumped to some 2100 officers and enlisted men. At the present time two Pursuit Groups, the 20th and 35th, and the 82nd Observation Squadron and 9th Air Base Squadron are located at Moffett Field.

With the large expansion in men and tactical units, Moffett Field, commanded by Colonel Robert E.M. Goolrick, has become a leading Air Base of the GHQ Air Force and a beehive of activity. Throughout the day can be heard the commands of the drillmasters giving the recruits a work-out. The drone of a formation of P-36A's high in the sky becomes a familiar sound.

In the field of sports we find two football fields, complete with bleachers, locker and shower room, a new base ball diamond and a quarter mile track in the process of construction. Moffett Field already has four asphalt tennis courts and one of the finest and best equipped gymnasiums in the Army.

Located in beautiful Santa Clara Valley, at the southern end of the San Francisco Bay, Moffett Field has excellent flying weather most of the year and is usually accessible when other fields nearby are closed. Visiting officers are welcome at Moffett Field, and their stay will be both delightful and refreshing.

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During January, the Engineering Department of the San Antonio Air Depot, Duncan Field, Texas, overhauled 11 airplanes and 137 engines and repaired 54 planes and 21 engines.

AIR CORPS ENGINEERING SCHOOL TO REOPEN

The Air Corps Engineering School, Wright Field, Dayton, Ohio, will reopen with the school year 1940-41. Due, however, to the lack of trained Air Corps officer personnel required to carry out the Expansion Program in all its phases, only officers assigned to the Materiel Division will be selected to attend the course.

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Farewell to 2nd Bomb. Group Personnel

(Continued from Page 6)

Captain Curtis E. LeMay, 1st Lieuts. Richard S. Freeman, James H. Rothrock, Herbert A. Orr, 2nd Lieuts. John B. Montgomery and Hiette S. Williams.

That is our contribution to the Air Corps. May we wish all the officers and enlisted men who have been transferred "Many Happy Landings."

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The Pirate Removes His Patch

(Continued from Page 5)

gain full power, vim and what have you, once more. Then he will sail his planes across the Isthmus to his new abode at Howard Field, leaving France Field with its well-planned and excellent airdrome in the offing, to the 7th Reconnaissance and the 39th Observation Squadrons as the permanent occupants of the ol' Pirate's den.

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"BLOWING OFF STEAM" AT GLENDALE SCHOOL

Flying Cadet traditions comparable to those at Randolph Field are being developed at the Air Corps Training Detachment at Grand Central Flying School at Glendale, Calif. The latest of these is the "shake the dust of primary training from our shoes" ceremony wherein, on their final flight in PT-13A's, the Cadets remove their shoes and "bomb" some predetermined isolated area with them.

The Cadets are looking forward to the return of summer weather, when the big tile swimming pool at the detachment will again be filled with water and Dodos can be tossed therein, flying attire and all, to cool off after making their first solo flight.

One of the Post Office Department's largest mail boxes has been installed on the front porch of detachment headquarters, so that the salute-the-mailbox tradition can be properly carried out. And, needless to say, since California is the land of grape fruit culture, goggles for breakfast are another observance at this detachment.

V-8375, A.C.

THE FEBRUARY, 1940, CLASS AT CIVILIAN PRIMARY FLYING SCHOOLS

A total of 425 students (404 from civil life and 21 from the Regular Army), constitutes the February, 1940, class of students beginning primary flying training, under the status of Flying Cadets, at the civilian elementary schools selected, under the Air Corps Expansion program, to give this phase of instruction.

The above number of students is divided among the civilian elementary schools, as follows:

Alabama Institute of Aeronautics	47
Chicago School of Aeronautics	28
Dallas Aviation School	68
Grand Central Flying School	47
Parks Air College	41
Ryan School of Aeronautics	42
Santa Maria School of Flying	63
Spartan School of Aeronautics	89
Total	425

The names and residences of these students are enumerated below, as follows:

Alabama Institute of Aeronautics, Tuscaloosa, Ala.

Gale, Herbert T.	Branford, Conn.
Cullen, James W.	Hartford, Conn.
Speiman, George Joseph	New London, Conn.
Buffum, John	Wallingford, Conn.
O'Donnell, Daniel D.	Wilmington, Del.
McDaniell, Samuel R., Jr.	Gainesville, Fla.
Mangham, James W., Jr.	Americus, Ga.
Helbig, Harry F.	West Lafayette, Ind.
Naylor, Winford Caldwell	Brookline, Mass.
Riordan, Jeremiah P.	Worcester, Mass.
Walbridge, Maurice E., Jr.	Ann Arbor, Mich.
Burns, Eliam B., Jr.	Hamilton, Miss.
Conlan, Douglas M.	Montclair, N.J.
McDowell, William A.	Oaklyn, N.J.
Miles, Frederic Earl	Canastota, N.Y.
Smith, Walter S., III	East Syracuse, N.Y.
Edmonds, Harold Wright	Garden City, N.Y.
Reynolds, Gardner Mead	Ithaca, N.Y.
Kenerson, Charles H.	Ithaca, N.Y.
Sponsable, Edson J., Jr.	La Guardia, N.Y.
LaPorta, Carlo A.	New York, N.Y.
Ferrante, Casey C.	Rochester, N.Y.
Zeng, William Bernard	St. Albans, N.Y.
Holshouser, Victor A., Jr.	Concord, N.C.
McArthur, Charles N.	Fayetteville, N.C.
McCall, David D.	Fremont, N.C.
Barry, John E.	Raleigh, N.C.
Pittman, Robert G.	St. Pauls, N.C.
Whitley, Raymond B., II	Wendell, N.C.
Hanson, Albert K., Jr.	Fargo, N.D.
Butler, Maurice E.	Scranton, N.D.
Bower, William M.	Cleveland, Ohio
Foad, Keats	Dallas, Pa.
James, John E., Jr.	Dormont, Pa.
Evans, Harry W.	Philadelphia, Pa.
Loftus, Joseph Francis	Philadelphia, Pa.
Mooney, Joseph Francis	Philadelphia, Pa.
Friedman, Verner William	Pittsburgh, Pa.
Murphy, James Herbert	Pittsburgh, Pa.
Stamm, William Albert	Pittsburgh, Pa.
Cease, Richard Wellington	Trucksville, Pa.
Boyd, Donald Robert	Chepachet, R.I.
Haskell, John Ellis	Pawtucket, R.I.
Brady, William P.	Columbia, S.C.
Felton, George Franklin	Arlington, Va.
Eastham, Rosser Jackson	Charlottesville, Va.
Powell, William H.	Morgantown, W.Va.

Chicago School of Aeronautics, Glenview, Ill.

Rogers, C.E.	Villa Grove, Ill.
Martin, K.F.	Bloomington, Ind.
McClarren, E.E.	Crawfordsville, Ind.
Taylor, W.B.	Indianapolis, Ind.
Summers, R.W.	Hammond, Ind.
Pfinget, W.K.	Syracuse, Ind.
Burnett, D.N.	Bloomington, Ind.
Bruch, N.E.	Blairstown, Iowa
Sexton, Douglas	Ames, Iowa
Thompson, R.A.	Keota, Iowa
Reed, W.N.	Marion, Iowa
Bowers, Warren	Logan, Iowa
Burnette, J.S.	Nicholasville, Ky.
Bocherek, E.L.	Grand Rapids, Mich.
Carey, E.J.	Hibbing, Minn.
Cooley, R.L.	Minneapolis, Minn.
Butenas, Carl	Brooklyn, N.Y.
Fitzpatrick, P.N.F.	New York, N.Y.
Forstner, F.R.	Yonkers, N.Y.
Jamieson, A.C.	Cleveland, Ohio
Kidd, J.B.	Oberlin, Ohio
Floyd, C.R., Jr.	Lexington, Va.
Satterfield, Paul, Jr.	Weston, W.Va.

Dallas Aviation School and Air College, Dallas, Texas

Berney, Oscar R., Jr.	Birmingham, Ala.
Lewis, Wm. C.	Birmingham, Ala.
Maloney, John E.	University of Ala.
Dillon, James E.	Denver, Colo.
Sharpless, Charles D.	Wilmington, Del.
Moon, Solomon D.	Gainesville, Fla.
Hardee, Cary A.	Trenton, Fla.
Astury, Robert B.	Atlanta, Ga.
Elton, Albert M.	Atlanta, Ga.
Fulton, Wm. L., Jr.	Atlanta, Ga.
Weibel, John G.	Atlanta, Ga.
Keiley, Edward M.	Athens, Ga.
Mangleburg, Lacy F.	Athens, Ga.
Hardy, Charles P.	Augusta, Ga.
Anderson, James A.	Dahlonega, Ga.
Cheatham, Sidney F.	Macon, Ga.
Hammond, George W., Jr.	Newman, Ga.
Maxwell, Jesse N.	Zebulon, Ga.
Cantor, Louis	Chicago, Ill.
Crowell, George T.	Chicago, Ill.
Hernlund, Richard T.	Chicago, Ill.
Lewis, Wm. V.	Chicago, Ill.
Jerome, Forrest Lenox, Jr.	Aurora, Ill.
Weldon, William James	Dwight, Ill.
Lewis, Carl F., Jr.	Jerseyville, Ill.
Elliott, James V.	Kewanee, Ill.
Radebaugh, Gus H., Jr.	Urbana, Ill.
Shank, Robert Bruce	Indianapolis, Ind.
Layson, John C.	Lafayette, Ind.
Small, Lytle Wm.	W. Lafayette, Ind.
Swann, Chesley I., Jr.	Anchorage, Ky.
Ramsey, James K. III	Madisonville, Ky.
Welch, Wesley K.	Bernice, La.
Burke, Dracos Dimitry	New Iberia, La.
McKoy, Edwin A.	New Orleans, La.
Evans, Edwin C.	Columbus, Ohio

Marshall, Thomas O.	Culver, Ind.
Clinch, James S., Jr.	Bethlehem, Pa.
Holdreth, Howard S.	Philadelphia, Pa.
Whitaker, Richard H.	Roxborough, Pa.
Fethmel, Robert C.	Ann Arbor, Mich.
Meehan, James J., Jr.	Grosse Pt. Farms, Mich.
Kinsey, John E.	Houghton, Mich.
Gibb, James A., Jr.	Lansing, Mich.
Gallagher, John V.	Bayonne, N.J.
Salisbury, Donald W.,Jr.	Madison, N.J.
Southard, Charles S.	Brooklyn, N.Y.
Cutler, Stuart G.	Fort Slocum, N.Y.
Veal, Wm. Watterston	New Rochelle, N.Y.
Grogard, Andrew J.	New York, N.Y.
Shanlian, Heros	New York, N.Y.
Cassidy, John A.	St. Albans, N.Y.
Semino, Guido John	Solvay, N.Y.
Thompson, Archibald N., Jr.	Walton, N.Y.
Gaffney, Bernard J.	Watertown, N.Y.
Neal, Joseph A., Jr.	Chattanooga, Tenn.
Lassberg, Alexander A.	Austin, Texas
Altman, George E.	San Antonio, Texas
Logan, James C.	San Antonio, Texas
Oxley, Thurston P.	Suffolk, Va.
Jacquet, Edward M., Jr.	Edgerton, Wisc.
Clarke, Weldon T.	Madison, Wisc.
Stroeger, Donald J.	Manitowoc, Wisc.
Richardson, Paul A.	Oconomowoc, Wisc.
Larson, Robert H.	Stevens Pointe, Wisc.
Sheahan, Wm. F., Jr.	W. Allis, Wisc.

Grand Central Flying School, Glendale, Calif.

Bradbury, Edwin P.	Glendale, Ariz.
Young, Robert L.	Paragould, Ark.
Moody, William W.	Bakersfield, Calif.
Kellar, Douglas H.	Berkeley, Calif.
Bancroft, Benjie G.	Los Angeles, Calif.
Massey, Russell A.	Los Angeles, Calif.
Bergen, Robert C.	Orange, Calif.
Harris, Merle W.	Riverside, Calif.
Graham, Owen R.	Riverside, Calif.
Heckathorne, Malcolm B.	San Leandro, Calif.
Mann, Dennis	Santa Cruz, Calif.
Osgood, John C., Jr.	Hansen, Idaho
Ambrose, Elmer E.	Chicago, Ill.
Woods, Edwin A.	Chicago, Ill.
Read, Arlyn V.	Peoria, Ill.
Welch, George S.	Lafayette, Ind.
Eugenes, Hubert L.	Story City, Iowa
Redding, Tom M.	Manhattan, Kans.
Koscinski, Arthur J.	Detroit, Mich.
Porter, Richard A.	Hanover, Mich.
Kriel, Erwin R.	St. Joseph, Mich.
Lovenberg, Robert B.	St. Paul, Minn.
Irvine, Chauncey	Bozeman, Mont.
Blackstone, Hollis Monroe	Absarokee, Mont.
Kruzic, Marion J.	Linn, Mont.
Nelson, De Laurence O.	Fargo, N.D.
Haas, Lucien C.	Youngstown, Ohio
Davis, Jack C.	Muskogee, Okla.
Blackledge, Roscoe B.	Stillwater, Okla.
Hampshire, John F., Jr.	Grant's Pass, Ore.
Armstrong, Tom L.	Amarillo, Texas
Bleymaier, Joseph S.	Austin, Texas
Barton, John R.	El Paso, Texas
Butler, Gerald E.	Portland, Ore.
Abbott, Zane	Cremonton, Utah
Carter, Thomas J.	Salt Lake City, Utah
Goldsworthy, Robert F.	Rosalia, Wash.
Porter, Grenville Neil	Tacoma, Wash.
Downing, Carroll A.	Fort Atkinson, Wisc.
Baclawski, Walter J.	Milwaukee, Wisc.
Walker, William J.	Torrington, Wyo.

Parks Air College, East St. Louis, Ill.

Comstock, K.N., Jr.	Fayetteville, Ark.
Gray, G.B.	Fayetteville, Ark.
Turner, D.L.	Fayetteville, Ark.
Keathley, R.C.	Danville, Ark.
Johnson, J.P.	Malvern, Ark.
Bishop, Edwin, Jr.	Lowell, Ark.
Schrader, H.C.	Champaign, Ill.
Engelmen, F.C.	Chicago, Ill.
Wiss, C.S.	Chicago, Ill.
La Rocque, G.R.	Kankakee, Ill.
Martin, W. McC.	Rock Island, Ill.
Kozlowski, J.J.	Boston, Mass.
Sayles, C.E.	Pittsfield, Mass.
Sweikhardt, K.W.	Ludington, Mich.
Cooney, J.C.	Roseville, Mich.
Bonin, D.E.	Minneapolis, Minn.
Wylie, T.T.	Lakewood, N.J.
Torresson, T.S., Jr.	North Bergen, N.J.
Broemel, W.F.	Pennington, N.J.
Burke, T.J.	Ridgefield Park, N.J.
Palliam, D.L.	Bloomfield, N.J.
Morgan, William T.	Binghampton, N.Y.
Ackerly, R.A.	Crystal Run, N.Y.
Krasnomowitz, Alex	Bronx, N.Y.
Kingsford, T.J.	Ithaca, N.Y.
Leonard, N.J.	New York, N.Y.
Richards, W. L.	New York, N.Y.
Brown, Fred D., Jr.	Ithaca, N.Y.
Nicholetti, F.N.	Hempstead, N.Y.
Fisher, J.K.	Providence, R.I.
Abbott, Nathan M.	Burlington, Vt.
Peeke, A.J.	Fon du Lac, Wisc.
Miller, D.C.	La Crosse, Wisc.
Yahr, R.R.	Madison, Wisc.
Longridge, E.F.	Ladison, Wisc.
Doherty, G.O.	Milwaukee, Wisc.
Tindall, Kenneth O.	Waterford, Wisc.

Ryan School of Aeronautics, San Diego, Calif.

McMillan, Donnelly R.	Parks, Ariz.
Vogt, Karl L.	Phoenix, Ariz.
Gartin, Herbert	Tucson, Ariz.
Rorbach, Lionel E.	Tucson, Ariz.
Sawyer, Charles W.	Tucson, Ariz.
Freeman, Garnett L.	Yuma, Ariz.
Schwartzman, Frank J.	Encino, Calif.
Stein, Joel E.	San Mateo, Calif.
Humiston, Leonard S.	Vencico, Calif.
Shipley, George W.	Berkeley, Calif.
Ramos, Eldred	Danville, Calif.
Schaefer, Albert G., Jr.	Hollywood, Calif.
Pray, Jack William	La Nea, Calif.
Markovich, George M.	Long Beach, Calif.
Allen, Charles Gilpin	Los Angeles, Calif.
Harmon, William Monroe	Los Angeles, Calif.
Hall, Glenn Wayne	Novata, Calif.
Miller, Ralph V.	San Diego, Calif.
Robertson, Vernon Owen	San Diego, Calif.
Seyms, Beach Wyndham	San Francisco, Calif.
Yanuskus, Barney P.	San Francisco, Calif.
Eichel, Henry H.	Ventura, Calif.
White, Joseph Dent	Wilmer, Calif.

Steele, Kenneth S.	Windsor, Calif.
Ramos, Henry Brown	Denver, Colo.
Terry, Henry M. III	Fort Collins, Colo.
Warrem, Earl T.	St. Anthony, Idaho
Willeford, Edward Gwen	Hardin, Mo.
Mayberry, Zeno O.	Leadwood, Mo.
Bonewitz, Norval G.	Missoula, Mont.
Evans, Harry L.	Miami, Okla.
Kelly, Sam E.	Norman, Okla.
Beach, William E.	Stillwater, Okla.
Chrisman, Everett Lowell	Stillwater, Okla.
Lauer, William J.	Stillwater, Okla.
Voyles, Ross E.	Stillwater, Okla.
Simmons, William N.	Teresita, Okla.
Jenkins, Paul	Salt Lake City, Utah
Eberhardt, Frederick E.	Salt Lake City, Utah
Baer, Charles R.	Salt Lake City, Utah
Bennion, Karren Layne	Salt Lake City, Utah

Allen Hancock College of Aeronautics, Santa Maria, Calif.

Sturgeon, Marvin G.	Fillmore, Calif.
Engman, Harry W.	Palo Alto, Calif.
Johnson, James M.	Boulder, Colo.
Rosener, Maurice	Fort Collins, Colo.
Jones, Harry, Jr.	Grand Junction, Colo.
Muckley, Dwight S., Jr.	Pueblo, Colo.
Butler, Jack H.	Moscow, Idaho
Mackin, Joseph W.	St. Anthony, Iowa
Lewis, Warren R.	Superior, Iowa
Nash, Clifford	Wellington, Kans.
Ketcher, Jesse J.	Wichita, Kans.
Pribonick, Charles J.	Keewatin, Minn.
Broin, Glenn O.	McIntosh, Minn.
Hugill, Robert M.	Minneapolis, Minn.
Norsen, Robert A.	Minneapolis, Minn.
Henry, Fred G.	Monette, Mo.
Bollwerk, Valentine W.	St. Louis, Mo.
Schubert, Leland C.	St. Louis, Mo.
Cowger, George T.	Craig, Nebr.
Hansen, Harold R.	Omaha, Nebr.
Maloney, Jack A.	Omaha, Nebr.
Marrs, Roy M.	Omaha, Nebr.
Tetiva, Ervin J.	Omaha, Nebr.
Herrman, William A.	Osceola, Nebr.
Peterson, Chester A.	Devils Lake, N.D.
Miluck, Edward T.	Grand Forks, N.D.
Burda, Orville F.	West Dickinson, N.D.
Wilson, James F.	Altus, Okla
Johnson, Harve N.	Fallas, Okla.
Fagen, Daniel W.	Keifer, Okla
Cremer, Francis X.	Lawton, Okla.
Carr, John L.	Norman, Okla.
Frieden, Delbert L.	Stillwater, Okla.
Tebault, Robert E.	Tulsa, Okla.
Berry, Richard J.	Rapid City, S.D.
Paulson, Gordin L.	Sioux Falls, S.D.
Purcell, Stuart M., Jr.	Austin, Texas
Miller, Seldon T.	Bellevue, Texas
Thornton, Charles V.	Blum, Texas
Gallup, Kenneth W.	Clint, Texas
Beckham, Charles A.	College Station, Texas
Green, Harry B., Jr.	Dallas, Texas
Hanks, Marshall Bovie	Dallas, Texas
Herron, Thomas Jackson	Dallas, Texas
Lincoln, Charles F., Jr.	Dallas, Texas
Gross, Elery George	Greenville, Texas
Duncan, Glenn Emile	Houston, Texas
Richardson, Elmer W.	Houston, Texas
Morgan, Kenneth Earl	Jacksboro, Texas
Thompson, Leslie M.	Katy, Texas
Neiser, Joseph B.	Austin, Texas
Hendrix, Francis W.	San Antonio, Texas
Sansom, Byron M.	San Antonio, Texas
Gary, Arthur Edward	San Marcos, Texas
Kuykendall, Matthew W.	San Saba, Texas
Saegert, Jesse Joe	Seguin, Texas
Ingram, Willie E.	Sweetwater, Texas
Christman, Luther Gwen	Texas City, Texas
Marchbanks, Alphonso C. III	Waxahachie, Texas
Parsons, Freeman A.	Salt Lake City, Utah
Hood, Stanley J.	Cheney, Wash.
Symbol, James J.	Pullman, Wash.
Tennies, Robert L.	Milwaukee, Wisc.

Spartan School of Aeronautics, Tulsa, Okla.

Thompson, Henry E.	Tuskegee, Ala.
Beezley, Wilbur B.	Everton, Ark.
Wormwood, Frank F., Jr.	Key West, Fla.
Mizell, Byron B.	Tallahassee, Fla.
Hickey, Jasper P.	Cusseta, Ga.
Daly, John P., Jr.	Newark, Del.
Christy, John Y.	Meridian, Kans.
Jones, Dale C.	Simpson, Kans.
Beckett, Thomas P.	Blue Mound, Ill.
Ert, Gilbert E.	Chicago, Ill.
Omena, Gilbert I.	Chicago, Ill.
Marvel, George B.	Clinton, Ill.
Porter, Russell A.	Galesburg, Ill.
Hagerstrom, Hobart S.	Galesburg, Ill.
Levy, Harold K.	Streator, Ill.
Hopkins, Rex W.	Centerpoint, Ind.
Harvey, Lyman K.	Lafayette, Ind.
Rush, Floyd C.	Lafayette, Ind.
Laczi, Robert C.	West Chicago, Ind.
Rosenthal, Herbert	Council Bluff, Iowa
Melloan, Barry E.	Lexington, Ky.
Ebereas, Richard J.	Louisville, Ky.
Saad, John I.	Pikeville, Ky.
Garrison, Lionel B.	Rogers, Ky.
Bassett, Francis T.	Great Barrington, Mass.
Mulvey, Wm. E., Jr.	Worcester, Mass.
Pettypiece, Bruce L.	Birmingham, Mich.
Costello, Dan J.	Minneapolis, Minn.
Johnson, Richard C.	Minneapolis, Minn.
Jackson, Clarence J.	St. Paul, Minn.
Oliver, Stuart K.	St. Paul, Minn.
Sheelar, Clare J.	St. Paul, Minn.
Edwards, Fred N.J.	Boone, N.C.
Parcell, Bruce F.	Cleveland, N.C.
Sensenbach, Elmer N., Jr.	High Point, N.C.
Eddy, Ernest C.	Fargo, N.D.
Browing, W.J.	Haddonfield, N.J.
Baiada, Laurence A.	Riverside, N.J.
Collinson, Wm. S.	Somerville, N.J.
Johnson, Arnold K.	Teaneck, N.J.
Zampieri, Robert C.	Union City, N.J.
Stieg, Carl A.	Astoria, N.Y.
Karpel, Raymond	Bronx, N.Y.
Ehrlick, Jack S.	Brooklyn, N.Y.
McKaba, Edward	Brooklyn, N.Y.
Oettinger, Frederic N., Jr.	Forest Hills, N.Y.
Kiyak, John J.	Ithaca, N.Y.
Dughi, Alexander J., Jr.	Ithaca, N.Y.
Morris, Frederick H.	Ithaca, N.Y.
Stebbach, Michael E.	Ithaca, N.Y.
Lundell, Richard M.	Long Beach, N.Y.
Early, Eugene T.	New York, N.Y.
Hicks, William B.	Rockville Center, L.I, N.Y.
Russell, David B.	Syracuse, N.Y.

Riggs, William O.	Columbus, Ohio
Booth, Robert E.	Fremont, Ohio
Smith, Paul Wesley	Middleport, Ohio
Landrum, Ray E.	Frederick, Okla.
Pinkerton, Clyde M.	Muskogee, Okla.
Price, Clyde E.	Stillwater, Okla.
Cheli, Ralph	Bethlehem, Pa.
Gibson, Charles A.	Bethlehem, Pa.
Germick, Stephen G.	Forty Fort, Pa.
Paules, Francis S.	Lansdale, Pa.
Steele, Thomas Emmett	Lewisburg, Pa.
Kratz, Robert L.	Norristown, Pa.
Comber, William N.	Philadelphia, Pa.
Levering, William C.	Philadelphia, Pa.
Stansberry, Charles E.	Clinton, Tenn.
Weaver, Dempsey, Jr.	Nashville, Tenn.
Blakemore, Emmett F., Jr.	Austin, Texas
Riha, Amos F.	Austin, Texas
Holmes, Robert W.	College Station, Texas
McClintick, Charles R.	College Station, Texas
Taylor, John F.	Center, Texas
Appelt, Osborne W.	Gonzales, Texas
Dingle, John E.	Houston, Texas
Johnson, Simon E., Jr.	Houston, Texas
Atcheson, Benjamin R.	Lubbock, Texas
Luscombe, Fergus C.	Lubbock, Texas
Warner, Rudolph B.	San Antonio, Texas
Edwards, George A.	Zephr, Texas
Harlow, Henry M.	Charlottesville, Va.
Schusle, William E.	Milwaukee, Wisc.
Van Epps, David A.	Williams Bay, Wisc.

Note: The students listed above were appointed Flying Cadets from civil life.

The students listed below were appointed Flying Cadets from their status as enlisted men of the Regular Army, viz:

Chicago School of Aeronautics, Glenview, Ill.

Root, R.C.	Chicago, Ill.
Chanute Field, Rantoul, Ill.	
Probst, A.E., Jr.	Taylor, Texas
Scott Field, Ill.	
Lambert, B.W.	Harman, W. Va.
Fort Monroe, Va.	
Henley, L.S., Jr.	Huntington, W.Va.
Fort Bragg, N.C.	
Holtz, Arthur, Jr.	Milwaukee, Wisc.
Chanute Field, Ill.	

Dallas Aviation School & Air College
Dallas, Texas

Jacobs, Kenneth C.	New Hyde Park, L.I., N.Y.
Mitchel Field, N.Y.	
Lorence, Wm. A.	Queens Village, L.I., N.Y.
Mitchel Field, N.Y.	

Grand Central Flying School, Glendale, Calif.

Korman, Julius A.	Los Angeles, Calif.
March Field, Riverside, Calif.	
Hall, Paul J. (Sgt.)	San Diego, Calif.
March Field, Riverside, Calif.	
Kaeberle, George E., Jr.	Loveland, Colo.
A.C. Det., Glendale, Calif.	
Sheehan, Gerald E.	Chicago, Ill.
4th Obs. Squadron, GHQ Air Force	
Soukup, Reynold A.	Chicago, Ill.
Selfridge Field, Mich.	
Hubler, George O.	Angola, Ind.
A.C. Det., Glendale, Calif.	
McDonald, J.L.	Chicago, Ill.
A.C. Det., Chicago, Ill.	
Norris, Othniel	Owensburg, Ky.
Scott Field, Ill.	
Holtz, C.J.	Clifton, N.J.
Mitchel Field, N.Y.	
Samuels, Beverly	Wichita Falls, Texas

Spartan School of Aeronautics, Tulsa, Okla.

Holder, William D.	Bloomington, Ill.
Chanute Field, Rantoul, Ill.	
Zdrojewski, Leonard R.	Detroit, Mich.
Selfridge Field, Mich.	
Curdy, David J.	Livingston, Mont.
Chanute Field, Rantoul, Ill.	
Gillenwater, Okey W.	North Spring, W.Va.
Langley Field, Va.	

For the first time in the history of peacetime flying training given by the Army Air Corps, New York has taken the lead in the matter of representation of students in a Flying Cadet class. With a total of 44 native sons in the new class, she barely nosed out Texas, which is runner-up with 43, followed by California with 31 and Illinois with 30. The honor of having the highest representation of students in the various classes at the Air Corps Training Center has usually been a nip and tuck proposition between Texas and California through the years, with Illinois looming up as a strong contender in the past year or so. The other states which are represented in the new class by five or more students are Pennsylvania with 20; Oklahoma, 19; Wisconsin, 18; Indiana, 17; New Jersey, 15; Georgia, 14; Michigan, 13; Minnesota, 11; Iowa and North Carolina, 9 each; Arkansas, Colorado, Kentucky and Ohio, 8 each; Arizona, North Dakota and Utah, 7 each; Massachusetts and Nebraska, 6 each; Florida, Kansas, Missouri, Montana and West Virginia, 5 each.

Chicago, Ill., leads the cities represented by students in the new class with 14, followed by Ithaca, N.Y., and New York City with 8 each; Philadelphia, Pa., and Stillwater, Okla., with 6 each; Austin and San Antonio, Texas; Los Angeles, Calif.; Milwaukee, Wis., and Salt Lake City, Utah, 5 each; Atlanta, Ga.; San Francisco, Calif.; St. Paul, Minn.; Brooklyn, N.Y.; Omaha, Nebr.; Dallas and Houston, Texas; 4 each; Pittsburgh, Pa.; Fayetteville, Ark.; San Diego, Calif., and Lafayette, Ind., 3 each. None of the other cities of the country is represented by more than two students.

Students who successfully complete the three months of primary training at the civilian elementary flying schools are transferred to Randolph Field, Texas, for the three months' basic course. The final three-months' advanced course is given at the Advanced Flying School at Kelly Field, Texas. Flying Cadets graduating from Kelly Field, Texas, are rated Airplane Pilots, commissioned second lieutenants in the Air Reserve, and assigned to extended active duty with Air Corps Tactical organizations. Under the present law, the maximum amount of active duty it is possible for an Air Reserve officer to obtain is seven years.

ACTIVATION OF NEW UNITS ON THE WEST COAST

Early in the morning on February 1, 1940, at March Field, Calif., the 19th Bombardment Group (Heavy), with some reluctance, gave birth to the 28th Composite Group. On that day the organization of administrative work began, and at this writing has progressed to the state where it is practically independent.

"We Guard the Frontier" seems a likely motto for the 28th Composite Group, which is bound for Alaska. This motto was suggested by Lieut. Colonel William H. Crom, who is commanding the Group. This officer's varied experience, including two years in Siberia during the World War, will be invaluable to this new Group.

"The aim of the 28th Composite Group," declares the News Letter Correspondent, "is to become the most proficient Group in the G.H.Q. Air Force, tactically and administratively, prior to its departure for Alaska."

As a part of the Air Corps Expansion Program, four new units were activated in the 1st Wing, GHQ Air Force, at March Field, Calif., on February 1, 1940. The Headquarters and Headquarters Squadron, 28th Composite Group; 36th Bombardment Squadron (Heavy); Base Headquarters and 23rd Air Base Squadron (S); and 89th Reconnaissance Squadron (M/R) were the units taking form.

In addition to Lieut. Colonel Crom, commander of the 28th Composite Group, the following officers were relieved from their present assignments and duties on February 1st and reassigned to the organizations indicated:

Captain Budd J. Peaslee, 2nd Lieut. Claude C. Sturges, Jr., Air Corps, and 1st Lieut. James A. Philpott, Air Reserve, to Hqrs. and Hqrs. Squadron, 28th Composite Group;

Captain William O. Eareckson, Air Corps, and 2nd Lieut. Alvin E. Hebert, Air Reserve, to the 36th Bombardment Squadron (Heavy);

Major Robin A. Day, 1st Lieut. Henry A. Sebastian and 2nd Lieut. Robert D. DeShazo, Air Corps, to Base Headquarters and 23rd Air Base Squadron (S);

Major Robert T. Cronau, 1st Lieut. Julian M. Chappell, 2nd Lieut. Clifford J. Heflin, Air Corps, and 2nd Lieut. Frank Norwood, Air Reserve, to the 89th Reconnaissance Squadron (M/R).

Absorbing a large part of the additional personnel from other units stationed at March Field, the new units above mentioned, with the exception of the 89th Reconnaissance Squadron, will be attached to March Field until their departure for Alaska at some future date. The 89th Squadron will be moved to McChord Field, Washington, in the near future.

As a result of new grades and ratings recently created, 264 Staff Sergeants and 345 Sergeants were issued warrants at March Field during the early part of February. There were also several additional First Sergeant grades created.

With respect to the activation of the 89th Reconnaissance Squadron, the News Letter Correspondent states that on Monday, February 5th, the officers of that Squadron, with 1st Sergeant Ezra E. Ebel and a staff of clerks, moved into a temporary orderly room, equipped with one table and chair (borrowed), and began the important task of organizing this new Squadron, to which 231 men had been transferred from the 17th Bombardment Group at March Field and from Air Corps units at Fort Lewis, Wash. Enlisted men from the latter organizations will remain at Fort Lewis until this unit has been moved to McChord Field.

Fortunately, the 89th was attached to the 17th Bombardment Group for rations and quarters, so that there was no immediate problem concerning the messing and housing of the enlisted personnel assigned. Later, separate barracks of the temporary type were obtained in the Group area and enlisted personnel moved into them on Friday, February 9th.

With a cadre of experienced enlisted men from the various units, the Squadron Commander (Major Cronam) is rapidly whipping the 89th into fine shape. A flight section has been organized and is now anxiously awaiting the delivery of assigned aircraft from other units of the 1st Wing, GHQ Air Force, which will be soon effected.

Says the News Letter Correspondent: "Given but a little more time and necessary equipment which, due to the extraordinary demands on the supply services, is being obtained slowly, Major Cronau, ably assisted by Lieut. Chappell and Lieut. Warren, will have a combat and photographic squadron second to none in the GHQ Air Force."

Upon the activation on February 1st of Base Headquarters and 23rd Air Base Squadron (Single), the initial strength thereof was 3 officers and 239 enlisted men, among the latter being 6 Master Sergeants, 8 Technical Sergeants, 7 Staff Sergeants, 18 Sergeants, 14 Corporals, 29 Privates, 1st Class, and 157 Privates. The entire personnel, both

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officers and enlisted men, were transferred from Base Headquarters and 4th Air Base Squadron (Double) GHQ Air Force, March Field, Calif., with the exception of Master Sergeant Earl H. Browning, who was transferred from Headquarters and Headquarters Squadron, 1st Wing, GHQ Air Force. The officer personnel consists of Major Robin A. Day, Squadron Commander; 1st Lieut. Henry A. Sebastian, Squadron Adjutant; and 2nd Lieut. Robert V. De Shazo, Squadron Mess Officer and Assistant Squadron Adjutant. The appointment of Lieuts. Sebastian and De Shazo to Squadron duties constituted the first order of the new organization.

The first official communication received by the Squadron was a radiogram from General Arnold, extending congratulations and best wishes for a history of successful achievement.

Early on the morning of February 5th, the organization occupied Building T-455 in that part of March Field called, by some soldiers, "Splinter City," and set up a Squadron Headquarters. Under the efficient leadership of the above named officers, the new Squadron began to function at once. In this manner, another Air Corps unit was brought into active service under the Air Corps Expansion Program.

On February 9th, the new mess was opened. On the following evening, a "Dutch Supper" was served to officers and enlisted men of the organization. On the list of invitations were names of several officers of March Field, including the new Wing Commander, Brigadier General Frank D. Lackland.

With respect to the activation of the 36th Bombardment Squadron, the News Letter Correspondent states:

"This scribe did not know the Latin for 'Our Watch Fires Are The Northern Lights,' but it seems like a pretty good motto for the 36th Bombardment Squadron (H), GHQ AF.

"Activated February 1, 1940, at March Field, Calif., the 36th Bombardment Squadron, commanded by Captain William O. Eareckson, has set for its goal recognition as the most efficient unit in the GHQ AF, both as a tactical and administrative unit.

"Destined for Alaska, the Squadron is part of the 28th Composite Group under command of Colonel William H. Crom.

"The rest of the Air Corps may relax, now that the 36th is scheduled to guard the frontier, from the Canadian Border to the North Pole."

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Mr. Sgt. John P. O'Callaghan, 72nd Bombardment Squadron, Hickam Field, T.H., was placed on the retired list Feb. 29th.

FLYING TIME AT RANDOLPH FIELD

It is always impressive to say that any Air Corps field flew 15,000 hours in one month - that is, it is impressive to the layman. But the man who has flown wants to know more than hours flown before he is even interested - number of planes - number of flying days.

The total flying time for any month at Randolph Field is always high. The first month of 1940, however, must have set some sort of record. The planes of the four school squadrons flew a total of 14,807 hours. This flying was done with 175 BT-9 type airplanes, making a monthly average of 85:59 hours per plane.

Looking further, we find that only 21 days permitted flying. This means that each plane was flown over four hours on each flying day. Records show that some of the training planes were flown as much as ten and a half hours in one day.

The record, by squadrons, goes to the 53rd School Squadron. With 42 planes, this Squadron put in 3,838:50 flying time, or an average of 91:24 per plane. "These last figures are truly remarkable," declares the Randolph Field Correspondent, and he adds: "Not only must the plane be in perfect condition, but instruments must function properly for instrument training.

At the lowly cruising speed of the BT-9, the month of January unreeled 2,072,980 miles flown for Randolph Field."

In twelve weeks, which included the important Holidays of Thanksgiving, Christmas and New Year, Class 40-B, at Randolph Field, Texas, has successfully given 214 students 75:30 hours of flying training. To maintain airplanes in flying condition for such a concentrated program of instruction was the major problem. This problem became even greater when the reorganization of the 53rd and 47th School Squadrons, which maintain the ships, replaced more than half of the Squadron's experienced crewmen by recruits. All airplanes in flying condition were used during both morning and afternoon flying hours. The average number of hours per ship per flying day was 4:11. On one occasion a single ship flew 12:25 hours during one calendar day for student training only. Maintenance crews worked regularly from 7:15 in the morning to 8:00 in the evening, with rests only for meals. While night flying was in progress, crews remained at the hangars until 11:00 at night. When an engine change was necessary, the crews usually

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CLASS 40-B REPORTS AT ADVANCED SCHOOL

On February 12th, at 10:00 a.m., 214 Flying Cadets and two student officers detrucked from convoy at the Building #48 lecture room for a welcome by Col. Eugene H. Lohman, Commandant of the Air Corps Advanced Flying School, Kelly Field, Texas. At this time Major Isaiah Davies, Assistant Commandant; Captain David M. Schlatter, Director of Flying; Captain C.L. Brothers, Flight Surgeon, and Captain P.D. Coates, Secretary, addressed the new class. Sergeant Andy Byron, of the Secretary's office, kept the class busy for an hour and a half properly filling out Locator Cards and the numerous other required forms.

The Class separated at noon, 45 students reporting at Brooks Field, Texas, where they became members of the newly formed Section V.

At 1:30 p.m. the following day, February 13th, all members of Class 40-B reported to their respective Section Chiefs for flight instructions. This Class will train in Sections II, IV and V, Class 40-A being assigned to Sections I, III and V.

After a brief talk by the Section Chief, each student was introduced to his new instructor and to his new ship, the BC-1. Three hours' ground study of the BC-1 was required before the first dual hop was scheduled.

The Advanced Training School is at present operating at full swing with a total of 430 Flying Cadets and 10 student officers, plus a varying number of refresher students. Members of Class 40-A, 224 in number, are rapidly approaching their graduation date which has been set for March 23rd. At that time Class 40-C will arrive from Randolph Field, thus holding the number of students continuously in training at Kelly and Brooks Fields to well over 430. This number is almost twice the total in the largest class that ever graduated from the Air Corps Advanced Flying School.

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GENERAL KROGSTAD VISITS KELLY FIELD

Brigadier General Arnold N. Krogstad, Commander of the 2nd Wing, GHQ Air Force, recently visited Kelly Field to confer with Training Center officials on the expansion program and student progress. Under the new system each Wing Commander will be responsible for conducting the specialization courses which students formerly received at Kelly Field. Bombardment, Pursuit and Observation courses will be given each graduate of the Training Center after his arrival at his first post for duty.

The purpose of General Krogstad's visit was to coordinate the specialization instruction with the Training Center course to avoid unnecessary repetition and to insure against any undesirable omissions. Majors Ned Schramm, J.W. Monahan and Lieut. William Curry accompanied the General.

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Flying Time at Randolph Field

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worked until 1:30 in the morning.

Although such a concentrated program will probably exist for another class of Flying Cadets - twelve more weeks - the addition of many new BT-14 training ships and the experience that the recruit crewmen will have received should allow "A" Stage to produce quite easily an even more enviable record than it has just established.

The time allotted for the present "B" Stage class (40-C) has reached the halfway mark. Practically all of the students have completed the elementary work and have received their first "check" rides with the Flight Commanders or Assistant Flight Commanders. Many students have reached the desired proficiency in advanced maneuvers, such as chandelles, lazy eights and pylon eights, and will receive the second progress check in the next few days. The first phase of night flying is almost completed, and instrument and acrobatic work is well started. Loss of flying days has continued, due to bad weather. Despite the fact that several days were lost, the work is almost abreast of the schedule. At present, the average dual instruction is 20 hours, and the average solo time 19 hours.

Class 40-D of 250 Flying Cadets reported at Randolph Field on February 14th and 15th and at once began preliminary military training.

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UNUSUAL WEATHER IN SOUTHERN TEXAS

The scribe of the 53rd School Squadron declares that it was a new Randolph Field the morning of January 22nd, when members of this organization awakened to find a nice blanket of snow covering the ground. Snow continued to fall all morning until a depth of some two inches was recorded. All available cameras seemed to be in action to record the unusual event. One "snow man" made on the lawn kept shape in some form or another until the night of January 28th, one week later.

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THE 18TH WING TRADE SCHOOL

In order to keep abreast of the Air Corps augmentation program, the 18th Wing has established and is conducting a complete trade school program for the training of enlisted men. In order to take care of the large number of men to be trained, it was necessary to launch an unprecedented training program. Present plans contemplate specialized training for approximately 1500 students by November 1, 1940.

On December 12, 1939, the Commanding General of the 18th Wing directed that Air Base Schools be established at Hickam and Wheeler Fields in order to train personnel for assignment to new units to be organized in the Hawaiian Department, and to have replacements available for personnel returning to the mainland. The project is being supervised by the Wing S-3, Lieut. Col. R. Beam, Air Corps. Each Base detailed an officer in charge of Trade Schools Instruction, Captain George R. Acheson being so detailed for Wheeler Field and Captain William A. Schulgen for Hickam Field. Additional officers and noncommissioned assistants were very carefully selected as instructors and assigned to the school as their only duty, and, since the school is a first priority project, the best fitted men were detailed as instructors, regardless of the job in their organization to which they were assigned.

The following system of trade schools was set up:

Hickam Field.

Aircraft Mechanics School in charge of 1st Lieut. Carl R. Feldman.

Aircraft Armorers School in charge of 1st Lieut. Edward Flanick.

Wheeler Field.

Photographers School in charge of Captain Minton W. Kaye.

Radio Technicians School in charge of 1st Lieut. Charles W. Haas.

Administrative and Technical Clerks School in charge of 2nd Lieut. Byron E. Hall.

Prior to opening of the Schools, it was necessary to give trade tests to all personnel of the seventh grade. This was accomplished between December 12th and 16th, with the result that the following number of men from Hickam and Wheeler Fields were selected to attend schools as indicated:

At Hickam Field:

Aircraft Mechanics Course, 23 each week
Aircraft Armorers Course, 13 each week
Until the maximum number desired is reached.

At Wheeler Field.

Photographers course, 16 each class
Radio Technicians course, 51 each class
Administrative and Technical Clerks course, 51

It is contemplated that a staggered system of classes be held and after the schools are in operation for a while there will be several classes in different stages of advancement. This allows for the greatest number of enlisted men to be trained in a given time.

To provide classroom space, it was necessary at both Bases to utilize hangars, all equipment being removed and the hangars divided into small classrooms by means of temporary partitions constructed of "Panac." In addition, all other available classroom space at each station was utilized.

The selection and classification of students is considered of prime importance. The following is the general plan now being employed: All recruits are given the normal processing immediately on arrival, including approximately six weeks of basic military training. All incoming men are also given a trade test. This is the most important step in the selection and classification. The test given is that used by the Air Corps Technical School, with some additional data. A trade test card is accomplished for each man by the examining officers in a personal interview. Utmost attention to detail is given in filling out these cards. This results in placing men in the type of work they are best qualified to pursue. Similarly, Alpha Mathematical tests are given to determine each man's capabilities and educational background. This latter test makes it possible to place men in the proper phase of instruction and results in simplification of instructional procedure.

The schools are being conducted along the same lines as the Air Corps Technical Schools on the mainland, and text books in the main were furnished by those agencies.

Instructors for Trade Schools:

Hickam Field, T.H.

Aircraft Armorers:

Colonel Merriott, C.W.S.,
1st Lieut. Flanick, Air Corps,
Captain Schulgen,
Sergeants Icenogle, Graham, Meador,
Corporal Nadzeika,
Staff Sergeant Christie,
Private 1st Cl. Bibin, Privates Fields and Vasalie.

Aircraft Mechanics course:

Master Sergeants Akers, Birk,
Technical Sergeants Brechtel, Brown, Chadron, Nielsen.

Staff Sergeants Pendleton, Nutting, Calcote, Gaudry, Flesher, Benzie, Nabor, Keahy; Welman, Mauchline;
Sergeants Collins, Lawrence, Norum, Hilton, Cavaleri;
Corporals Finngan, Morgan;
Privates Giacoma, Haynes, Bradford, Garriga.

Wheeler Field, T.H.

Photographers Course:

Captain Minton W. Kaye,
Master Sergeant Bush,
Technical Sergeants Jennings, Dittoe,
Sergeant Evans.

Radio Technicians Course

Technical Sergeant Klein,
Sergeants Mitchem, Landreth, Cummings,
Corporals Bagby, Sparks, Hyde, Worden, Cunningham,
Privates Southward, Sager, Nelson.

Clerical Course:

2nd Lieut. S.E. Hall, Air Reserve,
Technical Sergeants West, Leamon,
Staff Sergeant Dukes,
Sergeant Gilman,
Corporals Debacher, Brown,
Private 1st Class Gamwell.

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PERSONAL TOUCH IN THE ARMY

Under the title "This is the Life," Marsh Maslin wrote the following in the DAILY COLUMN of a recent issue of the San Francisco Call-Bulletin:

"A prominent gentleman of our town has a son who is a private in the army air corps, at present detailed for instruction at Lowry Field, Denver. The boy writes regularly to his parents, but the other day they suddenly realized they had not heard from him for nine or ten days and, as parents will, they began to worry. So the father wired for information and received word that their son was in a hospital for treatment. They worried even more then and the father secured from the Presidio the information that the head of the Lowry Hospital where his son was staying is Colonel C.D. Buck.

He sent an airmail letter immediately to Dr. Buck, explaining that the boy, a private in the army, was in Lowry and the boy's mother was worried.

In exactly forty-eight hours a long air mail letter from Colonel Buck arrived. He explained that the boy had had an abscess in the back of his throat, that he had come through an operation well, and was resting easily. He closed with a paragraph to the boy's mother telling her not to worry, that her boy was all right and that barring unforseen complications he would be out of the hospital soon.

And the boy's father asks this question: 'Is there any other army in the world in which the head of a large government hospital would write personally to the mother of a private soldier to relieve her worry about her son?'

I can't think of any. Can you?"

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EDUCATIONAL PROGRAM FOR HAMILTON SOLDIERS

Hamilton Field has a New Educational Program. Under the direction of Colonel John F. Curry, Base Commander, and Major Raymond Morrison, E. & R. Officer, the State Department of Education has established a general program of instruction for the enlisted men at Hamilton Field. Since early in January, eight classes have been started, with an enrollment of more than 250 men under seven teachers. At San Rafael High School four classes are conducted in Basic Mathematics and English. At Marin Junior College there is a class in Elementary Electricity, and at Tamalpais High School a class in Machine Shop Practice.

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HAMILTON FIELD FURNISHES MANY LECTURERS

Officers of Hamilton Field, Calif., are being called upon more and more frequently to make speeches and talks before civic bodies and other institutions of the kind in the San Francisco Bay area. Their reputation is spreading rapidly beyond the Bay Area, up and down the Coast and as far east as Salt Lake City. Recently, one officer made an address in Portland, Oregon, while another was speaking in Salt Lake City. Recent speeches by officers from the Air Base were as follows:

On February 1st, Captain Reuben C. Hood addressed the San Rafael Lions Club on the subject of "Hamilton Field and its place in the West Coast Defense."

On February 7th, Lieut. Colonel Ralph Royce, Commanding Officer of the 7th Bombardment Group (H), addressed the Portland, Oregon, Post of the Society of Military Engineers on the "Air Arm and the Army Engineer."

On February 10th, Colonel Royce also addressed the Richmond, California, Rotary Club.

On Sunday morning, February 11th, Captain Hood also addressed a joint meeting of several local chapters of the Native Daughters of the Golden West at a meeting in San Francisco on the subject of National Defense.

On February 13th, Lieut. Charles L. Hamilton, Air Reserve, participated in a panel discussion with officers of the Navy and Marine Corps, at a meeting of the Hamilton Field Legion Auxiliary at

Vallejo.

On February 23rd, Captain Stanley K. Robinson went by air to Salt Lake City to address the Chamber of Commerce of that city. Captain Robinson's subject was "The GHQ Air Force."

In addition to the officers listed, Corporal R.D. Boren, of the Engineering Department, made a fine address before the San Rafael Chapter of the International Association of Machinists on February 8th. Corporal Boren, as a master machinist, addressed the group on the machinist's place in Air Force maintenance.

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SURVEY BY AIR OF DUCK POPULATION

Four members of the United States Biological Survey recently accompanied Lowry Field officers on a trip in a B-18A airplane over Colorado lakes and rivers for the purpose of counting ducks in this region. This survey is conducted annually by the above-named governmental agency and is considered a highly important part of the Conservation Program.

On sighting resting waterfowl, the plane flies directly overhead at an altitude of about 1000 feet, when the birds are counted by scanning and estimation. The plane then returns at a much lower altitude and flushes the flock. As the birds rise from the water, the biologists are able to estimate the numbers of each species by the coloring and other characteristics. This is a visual count and is usually supplemented by a photographic count. Vertical aerial photographs of resting flocks are placed under a microscope and the ducks counted. Visual estimates and photographic estimates seldom vary, but are valuable as checks.

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NEW EDUCATIONAL EQUIPMENT AT LOWRY FIELD

An interesting and efficient innovation in educational equipment at the Denver Branch of the Air Corps Technical School, Lowry Field, Colo., is the RCA combination public address and communication system recently installed in the Clerical School. By means of this installation, the Director of the School can address each of the nine classrooms or all at once, thus removing the necessity of assembling the students. The two-way communication makes it possible for the instructors to be in communication with the office at any time."Other departments are casting envious eyes at the Clerical School," declares the Lowry Field Correspondent.

ANNIVERSARY OF DENVER BRANCH OF A.C.T.S.

February 28, 1940, marks the second anniversary of the opening of the Denver Branch of the Air Corps Technical School, Lowry Field, Denver, Colo. During two years of operation, Lowry Field has managed to adhere to a regular schedule, even though meeting obstacles created by construction and expansion.

Up to February 28, 1940, a total of 46 officers graduated from the Denver Branch School, including officers from foreign countries.

Of the 1171 enlisted men graduating from this School, 590 members of the Regular Army and 12 from the National Guard, foreign countries, etc., attended the School of Armament; 280 members of the regular army and 12 others, the School of Photography, and 275 Regular Army enlisted men the Clerical School.

First commanded by Colonel Junius W. Jones, the School has been under the command of Colonel Jacob Rudolph since July 1, 1938. A steady flow of men trained to become aerial photographers, aircraft armorers, bomb sight maintenance men and clerks have left this branch of the Air Corps Technical School to take their places in Air Corps organizations throughout the United States and the possessions.

There have been difficulties incident to the occupation of any new post that have tended to hamper class work, but without exception the men have cooperated to the fullest degree. Inconveniences and temporary discomforts have been cheerfully ignored, and morale has remained at a high level.

Many temporary structures were recently completed at Lowry Field. During February, the School of Photography moved into a new classroom and laboratory that is ideally appointed for efficiency and space.

A new gymnasium, dedicated when Col. Rudolph was host to the Children's Christmas Party there on December 23rd, is now being extensively used by the personnel of the post. Several official basketball games have been played there, and twice a month the A. and R. Department gives a dance for post personnel and their guests. A complete line of athletic equipment is available for various sports.

"Lowry Field," says the News Letter Correspondent, "begins its third year with a feeling of satisfactory accomplishment in the past and with full confidence in the future under the guidance and direction of Colonel Jacob H. Rudolph."

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CAPTAIN FERGUSON 'DISCOVERS' ISLAND OF KAHOOLAWE
By the Hickam Field Correspondent

The "Lady Jo," a 40-foot schooner, owned and skippered by Mr. Sam Emmes, of Honolulu, and which plied the waters of the Pacific in the last International Pacific Yacht Race, between Treasure Island and Honolulu, recently sailed from Honolulu for Kahoolawe, an island of the Hawaiian Group inhabited by only three persons and devoid of up-to-date facilities, such as automobiles, telephones, radios and modern homes. The trip was not undertaken for the purpose of discovering this island, because it has been known to exist even before Captain James Cook in 1778 pulled a "Christopher Columbus" on the Hawaiians and their peaceful group of islands, then known as the Sandwich Islands.

Aboard the "Lady Jo" were military personnel from Hickam Field, namely, Captain Homer W. Ferguson, the Base Operations Officer, and Privates Clifford H. Decker, Portan Wagner, Weldon C. Burlison and Furman C. Martin, all members of the Base Headquarters and 17th Air Base Squadron.

The Island of Kahoolawe was sighted on the third day out, but the trip, which was marked down in the log book as uneventful, did not end there, for there were none of the 20th century docks to tie up to, and a complete trip around the island was necessary in order to find a suitable cove wherein to anchor the vessel. One was found, appropriately named "Smugglers' Cove," and a rowboat was then used to get to shore.

At the very outset the expedition faced a difficult situation for, in order to reach the plateau, a 400-foot cliff had to be scaled. After considerable hardship, this obstacle was overcome, and Captain Ferguson led his party in search of material and supplies which had been dropped by parachutes from airplanes of the 17th Air Base Squadron and the 5th Bombardment Group, Hickam Field.

After a short search, the supplies were discovered. Ten condemned parachutes were used in dropping the supplies, which consisted of 1600 pounds of lime; one rubber-tired dolly for transporting the supplies to the site utilized for the construction work; 40 condemned rubber rafts; a keg of large spikes, which were used to stake down the rubber rafts; picks; shovels and a large sledge hammer. All supplies landed safely and free of injury from their first parachute jump.

Then the work began. Two principal targets were constructed, one of lime which had a bullseye and a 200-foot circle, and one of the same size, constructed by nailing down the rubber rafts with the yellow side up, to the extremely hard lava surface. Another target, oblong in shape, was constructed of lime. Two days were required to complete the construction of these targets.

With pomp and ceremony conspicuous by its absence here in the land known the world over for its hospitality, the "Lady Jo" weighed anchor and sailed for her home port. Late Saturday afternoon, January 13th, after a trip of two days and nights, she slipped quietly in and tied up at her berth in Kewalo Basin. After a fond "Aloha, ame mahalo no ka maikai kalepa" to Mr. Emmes and "Lady Jo," Captain Ferguson again led his expedition back to Hickam Field.

During the trip and while anchored in the cove at Kahoolawe, the party ate and slept aboard the "Lady Jo." Like any other worthy sea-going vessel, she is equipped with an up-to-date galley and spacious sleeping quarters for about nine persons.

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SUCCESSFUL FLASHLIGHT FLIGHT

Aerial photography at night is conceded to be of vast importance in military operations and, in consequence thereof, it receives serious attention at the School of Photography at the Denver Branch of the Air Corps Technical School, Lowry Field, Colo. On the latest night photographic mission, six flashlight pictures of terrain near Lowry Field were made from a B-18A airplane, which, carrying flashlight bombs and a Fairchild K-12 night camera, was piloted by Captain Paul T. Cullen, Assistant Director of the School of Photography, and Lieut. David W. Hutchinson, also of the School. Accompanying them were Lieuts. Cirilo Halley-Harris, of Chile, and Roberto Gibert, of Argentina. The South American officers are enrolled in the School of Photography.

Flights of this nature attract considerable local attention due to the intense light generated over an area of several square miles. The mission was successfully accomplished, and the party returned to Lowry Field after making six photographs of Bombing Range terrain.

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Captain Thomas M. Lowe, Air Corps, who recently graduated from the Command and General Staff School, was assigned to the Air Corps Board, Maxwell Field, Ala.

RADIO BROADCAST OF AIR CORPS SONG

The U.S. Navy Band will play the official Air Corps Song, "The Army Air Corps," during its National Broadcast from Washington between 2:30 and 3:00 p.m., Eastern Standard Time, on

Monday, March 18, 1940

Due to a series of unforeseen circumstances, which happen now and then in the best laid plans, the broadcast of this song on February 19th, as announced in the previous issue of the News Letter, did not materialize.

The half hour program on March 18th, which will include the Air Corps Song, will be broadcast over the following stations:

WJZ - New York
WBZ - Boston
WBZA - Springfield, Mass.
WEAN - Providence, R.I.
WICC - Bridgeport, Conn.
WFIL - Philadelphia, Pa.
WMAL - Washington, D.C.
WSYR - Syracuse, N.Y.
WEBR - Buffalo, N.Y.
KDKA - Pittsburgh, Pa.
WHK - Cleveland, Ohio
WXYZ - Detroit, Mich.
WOWO - Fort Wayne, Ind.
WENR - Chicago, Ill.
KWK - St. Louis, Mo.
WMT - Cedar Rapids, Iowa.
WTCN - Minneapolis, Minn.
KSO - Des Moines, Iowa
WREN - Kansas City, Kans.
WRTD - Richmond, Va.
WNBC - Hartford, Conn.
WABY - Albany, N.Y.
WMFF - Plattsburgh, NY
WJTN - Jamestown, N.Y.
WLEU - Erie, Pa.
WJIM - Lansing, Mich.
WIBM - Jackson, Mich.
WELL - Battle Creek, Mich.
WEBC - Duluth, Minn.
KYFM - Mankato, Minn.
KROC - Rochester, N.Y.
KFAM - St. Cloud, Minn.
KFOO - Sioux Falls, S.D.
KAMF - Wichita, Kans.
WPTF - Raleigh, N.C.
WFOC - Charlotte, N.C.
WFBC - Greenville, S.C.
WIFE - Asheville, N.C.
WIS - Columbia, S.C.
WOLF - Florence, S.C.
WIMA - Charleston, S.C.
WJAX - Jacksonville, Fla.
WFLA - Tampa, Fla.
WLAK - Lakeland, Fla.
WIOD - Miami, Fla.
WAVE - Louisville, Ky.
WSM - Nashville, Tenn.
WMPS - Memphis, Tenn.
WSGN - Birmingham, Ala.
WAGA - Atlanta, Ga.
KTHS - Hot Spgs., Ark.
WDSU - N. Orleans, La.
WJBO - Baton Rouge, La.
KVOO - Tulsa, Okla.
KARK - Little Rock, Ark.
WGAL - Lancaster, Pa.
WKBO - Harrisburg, Pa.
WTAR - Norfolk, Va.
WBLK - Clarksburg, W. Va.
WGKV - Charleston, W. Va.
WOCL - Columbus, Ohio
WHIZ - Zanesville, Ohio
WING - Dayton, Ohio
WOOD - Gr. Rapids, Mich.
WBOW - Terre Haute, Ind.
WGBD - Evansville, Ind.
WIBA - Madison, Wis.
WFDF - Flint, Mich.
WBCM - Bay City, Mich.
KMA - Shenandoah, Iowa
KSCJ - Sioux City, Iowa
KOWH - Omaha, Nebr.
WFAI - Cincinnati, O.
WLBZ - Bangor, Me.
WRDO - Augusta, Me.
WFEA - Manchester, N.H.
WBRE - Wilkes-Barre, Pa.
WSAN - Allentown, Pa.
WORK - York, Pa.
KGNC - Amarillo, Texas
KTOK - Oklahoma City, Okla.
WOAI - S. Antonio, Texas
KGKO - Ft. Worth, Texas
KXYZ - Houston, Texas
KFDM - Beaumont, Texas
WDAY - Fargo, N.D.
KFYR - Bismarck, N.D.
KGO - San Francisco, Calif.
KECA - Los Angeles, Calif.
KTMF - Santa Barbara, Calif.
KFSD - San Diego, Calif.
KEX - Portland, Ore.
KFBK - Sacramento, Calif.
KWG - Stockton, Calif.
KERN - Bakersfield, Calif.
KJR - Seattle, Wash.
KGA - Spokane, Wash.

CHENEY AWARD TO GO TO LIEUT. H.L. NEELY

The Acting Secretary of War, the Hon. Louis Johnson, announced on March 1st that First Lieutenant Harold L. Neely, Air Corps pilot at Lowry Field, Denver, Colo., has been selected to receive the Cheney Award for the outstanding act of valor in connection with aircraft in 1939.

The act of heroism which prompted the selection of Lieut. Neely to receive this honor occurred near Hill City, Kansas, on December 18, 1939. Lieut. Neely was piloting an Army Bomber at an altitude of 11,000 feet high above a thick dust storm which entirely obscured the earth below, when both engines stopped. After attempting in vain to start his motors, he called to his three passengers through the airplane interphone, instructing them to jump. As the airplane descended, he saw two parachutes open and disappear in the thickening haze. The third passenger also jumped, but from the closed-in pilot compartment it was not possible for him to determine whether the last man had cleared the disabled Bomber. Convinced that if he abandoned the plane an innocent victim might ride to his death, Lieut. Neely decided to take his chances on a forced landing. Flying blind through the surging dust storm, he descended to an altitude of 500 feet before the ground became visible. Miraculously, Lieut. Neely escaped injury as the big plane skidded to a stop in a 40-mile-an-hour wind.

"This heroic act demonstrated extreme courage and self-sacrifice far beyond the call of duty," Colonel Johnson stated in announcing Lieut. Neely's selection.

The Cheney Award, presented annually for the outstanding act of valor, extreme fortitude or self-sacrifice on the part of military personnel in connection with aircraft, was established 13 years ago in honor of 1st Lieut. William H. Cheney, Air Corps, who was killed in an air collision at Foggia, Italy, in 1918. The donors are Lieut. Cheney's mother, Mrs. Mary L.C. Scofield, of Peterboro, N.H., and his sister, Mrs. Ruth Cheney Streeter, of Morristown, N.J.

Thus far, twelve individuals have been honored by the Cheney Award. Master Sergeant Harry A. Chapman, of the 19th Airship Company, Langley Field, Va., first received it in recognition of his heroism, presence of mind and extreme fortitude during the great catastrophe on February 21, 1922, when the airship ROMA crashed and burned. Sergeant Chapman received the award in 1927, and in subsequent years the honor has gone to Captain Uzal G. Ent, Air Corps, for 1928; to Captain William A. Matheny, Air Corps, for 1929; to 1st Lt. Robert D. Moor (posthumously) and to Private John B. Smith, Air Corps, for 1931; to Private Arden M. Farley, Air Corps, for 1932; jointly to the late Lieut. W.L. Bogen and to Staff Sgt. Doy D. Dodd and Sergeant Thomas J. Rogers, for 1933; to the late 1st Lieut. Robert K. Giovannoli for 1935, and to Major Frederick D. Lynch and Staff Sergeant Joseph L. Murray, Air Corps, for 1936.

ACTIVATION OF NEW AIR CORPS UNITS

31st Pursuit Group

At 11:00 a.m., February 1, 1940, at Selfridge Field, Mich., the 94th Pursuit Squadron, 1st Pursuit Group, GHQ Air Force, augmented by some 120 attached enlisted men, formally became the 31st Pursuit Group, GHQ Air Force.

"To those of us who had originally belonged to the 94th Squadron the occasion was fraught with mixed emotions, a certain sadness at giving up our status as members of the Air Corps outstanding squadron together with its tradition and background," says the News Letter Correspondent, adding "and a certain enthusiasm at the prospect of our own organization, without tradition or history, the making of which was to be our own task. The day itself, if taken for an omen, indicates that much is in store for us, the ceremony held on the snow-covered main highway consisting of a formal muster of the new organizations and an official presentation of the new unit to the Base Commander, who in turn briefly outlined our task, wished the organization well and turned it over to Major Harold H. George as Group Commander. A light snow, coupled with a chill Michigan wind, kept spectators to a minimum, but the 'Gentlemen of the Press' and their attendant photographers were much in evidence.

"Immediately after the presentation ceremony, the Group Commander spoke briefly and, after returning the squadrons to their respective commanders, a formal presentation of the noncommissioned officers' warrants was held. To the enlisted men of all commands who had waited for long periods of time anxiously watching for a vacancy in their organizations to break the slow promotion, the day held much, some 105 promotions resulting for the new Group.

"Our squadron commanders, Captain Paul B. Wurtsmith, of the Headquarters Squadron; Captain Allen R. Springer, of the 39th Pursuit Squadron, and Captain John F. Egan, of the 40th Pursuit Squadron, have entered on their new jobs with an enthusiasm seldom seen in new units. Every officer and every man in the Group is determined to make it the best command in the Air Corps. Our only regret is that the third tactical squadron of the 31st Group, the 41st Pursuit Squadron, currently at Bolling Field, cannot be with us fully to share our work.

"A Communications School has been started with a view to training Radio Mechanics and Operators to fill our quota, shortly to be followed by a course for clerks. Lieut. Franklin H. MacNaughton, assisted by Master Sergeant M.E. Hay, operate the school in a business like fashion, as indicated by recent results of mathematics examinations."

40th Pursuit Squadron

On the first day of February, the 40th Pursuit Squadron of the new 31st Pursuit Group, GHQ Air Force, was formed at a very impressive ceremony at which the command of the 40th was assigned to Captain John F. Egan. The new 40th is comprised of men transferred from various squadrons of the First Pursuit Group. Most of these men received promotions in the new Squadron.

Officers and enlisted personnel alike are striving to bring the 40th Pursuit Squadron up to the highest standards of the United States Air Corps.

On the tenth of February, we were inspected by our new Group Commander, Major George. This was his first hangar inspection, and he expressed himself as being well pleased with the condition of both personnel and equipment.

39th Pursuit Squadron

The 39th Pursuit Squadron, GHQ Air Force, commanded by Captain Allen R. Springer, was activated February 1,1940, with a very impressive ceremony.

Although we are only three weeks in our infancy, everyone is striving very hard to make the 39th one of the best squadrons in the Air Corps. We are handicapped by lack of equipment, but are moving ahead steadily. It is rumored we are to receive our quota of new planes very soon, and with new pilots who will report sometime in March, our Flight Commanders are keeping their fingers crossed.

Our 41st Pursuit Squadron, activated at Bolling Field, D.C., on February 1, 1940, is making progress, and we salute them. All are hoping the Group will be in our new home, Mitchel Field, N.Y., in the near future.

27th Bombardment Group (Light)

Hqrs. and Hqrs. Squadron: This organization steps forward with pride since February 1, 1940, the day it was activated. The officer personnel was derived from the 3rd Bombardment Group (L), GHQ Air Force, with the exception of Col. C.L. Tinker, the Group Commander, formerly from Base Hq. and 6th Air Base Squadron (Double) and Major G.A.McHenry, who is at present at Fort Benning, Ga., participating in maneuvers, and formerly from the Command and General Staff School at Ft. Leavenworth, Kansas. The enlisted personnel was derived from almost every Air Corps Squadron at Barksdale Field. The Squadron feels highly honored in being awarded the able and

highly efficient Commanding Officer, Captain John F. Guillett, formerly Commanding Officer of the 8th Bombardment Squadron (L), which won the Harmon Efficiency Trophy last year.

15th Bombardment Squadron (L): The 15th is rapidly assuming the normal functioning of a Squadron, having established its administration center and barracks in the recently built recruit area. Many promotions are coming through to fill the quota prescribed, 22 Privates being given first class ratings, six Sergeants being promoted to Staff Sergeant, eight Corporals to Sergeant, and 17 privates to Corporal since February 1st, when the Squadron was formed.

17th Bombardment Squadron (L): The first three weeks of this Squadron's operation has shown a determination for it to be second to none in efficiency and high standard of morale. All members have pitched in and developed their departments to a point where they are running smoothly.

16th Bombardment Squadron: After long waiting, approximately one-half of the 13th Bombardment Squadron (L) picked up their personal belongings and moved to the new temporary barracks, activating the new 16th Bombardment Squadron (L), GHQ Air Force, in accordance with orders from the War Department.

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ACTIVITIES OF 27th RECONNAISSANCE SQDN.

The 27th Reconnaissance Squadron, stationed at Boringuen Field, Puerto Rico, after two months of operation, is becoming more acclimated to its surroundings. With all missions running per schedule, because of excellent weather conditions, training of Squadron personnel is progressing rapidly.

During the last two weeks of January the 27th took part in a meneuver which included all the ground forces of the Puerto Rican Department and some Naval units. The problems were very interesting and all concerned gained very valuable experience.

On February 10th, General George Marshall, Chief of Staff, arrived from Maracaibo in a B-17B "Flying Fortress," piloted by Major Harold H. George, Commanding Officer of the 2nd Bombardment Group, Langley Field, Va. After an inspection of all the units in the Department, the General left on February 12th for Miami, Fla., escorted by six B-18A's?

Aerial Gunnery was in progress for several weeks, with two B-18A's towing targets and two of them firing on same. From 4 to 6 men have been qualified as expert aerial gunners every mission.

AIR CORPS OFFICERS GRADUATE FROM NAVIGATION SCHOOL IN HAWAII.

Ten brand new celestial and two dead reckoning navigators, the first in a series of classes set up as a part of the training program of the 5th Bombardment Group, Hickam Field, T.H., were handed their certificates of graduation by the 18th Wing Commander, Brigadier General Walter H. Frank, before assembled officers at that field on January 13, 1940.

Prior to awarding the diplomas, General Frank stressed the value of accurate and dependable air navigation in this Department, pointing out that the present standards of navigation will soon be outmoded by the requirements of even faster airplanes of much greater range than the present B-18 type Bomber. "In the words of the well known Charles Winninger, of 'Show Boat' fame, 'this is only the beginning folks, only the beginning,'" he said.

"This Wing is faced with a navigation problem not encountered by any other unit in the Air Force," General Frank added, "in that our flying is totally over water and devoid of landmarks and the usual aids to navigation available to unit operating over the continental United States, and we are very fortunate to have the facilities and the instructors that we have, Major Albert F. Hegenberger, Air Corps, known to all of you for his flight across the Pacific to this Island in 1927, and Lieuts. Hugh F. McCafferty and Paul Ashworth, Air Corps. If I had my pick of all the officers of the Air Corps for navigation instructors, I doubt that I could find any better qualified."

Colonel Walter F. Kraus, Air Corps, Commanding Officer of the 5th Bombardment Group, Hickam Field, expressed his gratification at the achievements of the class as well as those of the instructors, pointing out that the accomplishment of some 300 hours of class room and flying problems, to say nothing of the time spent in preparation and "home work," were necessary in order that the tactical effectiveness of the Bombardment units in time of war should not be wasted, due to the inability of the Bombers to find their targets.

Major Albert F. Hegenberger, 5th Bombardment Group Executive Officer, under whose supervision the class was conducted, spoke briefly and introduced the principal speakers. The Invocation and Benediction were pronounced by Chaplain James C. Bean.

Members of the graduating class were Captain Ralph Rhudy and 2nd Lieut. James T. Posey, 23rd Bombardment Squadron (M); 1st Lieut. Walter C. Sweeny, Jr., 2nd

Lieuts. William J. Cain, Jr. and Paul S. Emrick, 31st Bombardment Squadron (M); 2nd Lieuts. Nils O. Ohman and Harry E. Hammond, 50th Reconnaissance Squadron (M/R); 2nd Lieuts. Render D. Denson and Raymond P. Salzarulo, 4th Reconnaissance Squadron (M/R); 2nd Lieuts. Robert S. Quinn and Weldon H. Smith, 72nd Bombardment Squadron (M).

Second Lieuts. Ronald D. Hubbard, 72d Bombardment Squadron, and Ira F. Wintermute, 50th Reconnaissance Squadron, both of the Air Reserve, graduated as Dead Reckoning Navigators.

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AN INCREDIBLE AIR BUMP

A bandaged head and nine stitches in his scalp is proof of the contention of Technical Sergeant James H. McAdams, of Wheeler Field, T.H., that he experienced one of the most terrific air bumps ever encountered.

Recently the Wheeler Field B-18, with Lieut. J.S. Holtoner, pilot, and Lieut. W.S. Steele, co-pilot, took off on a flight to Kauai, the island on the northwest end of the Hawaiian Group. Instead of the usual northeast trade wind, a strong Kona wind (anything other than a NE wind is called "Kona") was blowing from the southwest. Upon arriving over the northeast edge (leeward side) of Kauai at a place called Kapaa, a downdraft was encountered that really made the "bottom drop out." The pilot and co-pilot were held in place by their safety belts, but the passengers were bounced around like ping pong balls.

When all was calm after passing the downdraft, Lieut. Holtoner looked around to see how his passengers had fared. The first one he saw was Lieut. Opeil, who had been sitting in the navigator's seat. That officer was climbing out of the hatch behind the co-pilot's seat (the passage-way down to the bombardier's compartment) and was looking languidly at a rip in his trousers. Next he saw the crew chief picking himself off the floor and the radio operator, who was sprawled on the floor, trying to untangle himself from the cords of his headset and microphone. At about this time one of the passengers in the rear came forward and said that Sergeant McAdams was bleeding quite badly from a head wound.

The pilot "poured on the coal" and headed for Burns Field on Kauai. After landing, Sgt. McAdams was rushed in a reconnaissance car to a doctor, who found it necessary to use nine stitches to repair the scalp. There were no serious complications, so after being patched up, Sgt. McAdams returned to the field and flew back to Wheeler Field in the B-18.

GRADUATIONS FROM A.C. TECHNICAL SCHOOL

On February 2, 1940, 75 students graduated from the Chanute Field Branch of the Air Corps Technical School, from the stations and courses as indicated below, viz:

Name of Field	A.M.	A.M.W.	A.W.
Barksdale	2	3	1
Bolling	-	1	-
Chanute	13	7	-
Duncan	2	-	-
Fairfield	1	-	-
Fort Bragg	-	-	1
Fort Lewis	-	-	1
Fort Riley	-	1	1
Hamilton	1	-	1
Harrison	1	-	-
Kelly	3	-	-
Langley	7	3	2
Lowry	1	1	1
March	3	-	-
Middletown A.D.	2	-	-
Mitchel	3	1	1
Moffett	1	-	-
Patterson	1	-	-
Randolph	1	-	-
Sacramento A.D.	1	-	-
Scott	-	1	-
Selfridge	2	-	2
Sherman	1	-	-
Total	46	18	11

On February 9, 1940, a total of 119 students graduated from six different courses of the Chanute Field Branch of the Air Corps Technical School from the courses and stations as indicated below:

Field	RR & O	IS	CS	PS	ES	PR
Barksdale	3	2	1	1	1	1
Bolling	-	-	2	1	2	4
Chanute	3	4	2	2	3	1
Duncan	-	1	-	1	1	1
Hamilton	2	1	-	1	1	1
Kelly	-	-	1	2	2	-
Langley	16	3	1	2	2	2
Lowry	-	-	-	2	-	-
March	4	-	-	1	1	2
Maxwell	-	-	-	-	-	3
Middletown	-	-	1	-	1	-
Mitchel	8	2	-	-	-	1
Moffett	1	1	1	-	1	-
Offutt	-	1	1	1	-	-
Pope	-	1	-	-	1	-
Post	-	-	-	-	-	1
Patterson	1	-	-	-	-	-
Randolph	2	-	-	-	-	-
Selfridge	-	1	1	1	1	1
Total	40	17	11	15	17	18

Key: RR & O - Radio Repairer & Operator
I.S. - Instrument Specialist
C.S. - Carburetor Specialist
P.S. - Propeller Specialist
E.S. - Electrical Specialist
P.R. - Parachute Rigger
A.M. - Airplane Mechanic
A.M.W. - Aircraft Metal Worker
A.W. - Aircraft Welder